



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Charlotte Amalie, VI	<b>Accident Number:</b>	ERA11LA117
<b>Date &amp; Time:</b>	01/17/2011, 0756 AST	<b>Registration:</b>	N8277Q
<b>Aircraft:</b>	CONVAIR 340-71	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Powerplant sys/comp malf/fail	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Positioning		

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## Analysis

Before departing on the flight that preceded the accident flight, the flight crew performed an engine-run, including a magneto check, during which they noted backfiring from the left engine. The captain first attributed the issue to water contamination of the fuel but then attributed it to fouled spark plugs. An additional engine run resulted in no further backfiring, and the captain decided to depart on the cargo flight; no maintenance was requested or performed on the left engine before departure.

When the airplane was near the destination airport, the left engine backfired once again. The flight continued to the destination airport where the airplane landed uneventfully and the cargo was off loaded; again, no maintenance was performed or requested for the left engine.

For the accident flight, the first officer was the pilot flying and the captain was the pilot monitoring. During the takeoff, the local controller noted black smoke trailing the left engine and advised the flight crew; however, the captain attributed the smoke to normal operation for the airplane type and decided to continue the flight. Meanwhile, air traffic control communications for the flight were transferred to San Juan Combined En Route Approach Control (San Juan CERAP). The local controller who noted the black smoke continued to watch the airplane's departure. When the airplane was about 1 mile west of the runway, the controller observed bright orange then red flames from behind the left engine and immediately informed the San Juan CERAP controller, who in turn immediately notified the flight crew.

The captain assumed control of the airplane and directed the first officer to go to the cabin to visually inspect the left engine. The first officer returned to the cockpit and informed the captain that he observed fire, and they immediately executed the fire checklist and shut down the left engine. However, the fire continued because it was located in an area where fire suppression bottles could not reach. The pilots returned to the airport; fire rescue vehicles were pre-positioned along various portions of the runway. The airplane touched down on the runway centerline. Because the fire had damaged the left brake line, braking was asymmetrical, and the airplane departed the right side of the runway and came to rest adjacent to the airport perimeter fence.

Postaccident examination of the left engine revealed a discrepancy of two cylinders in which the pistons did not move during rotation of the engine. This discrepancy could result in unburned fuel or oil entering the exhaust system and igniting in the exhaust or augmentor tubes. Examination of the airframe found that the augmentor tubes had been removed after the accident. Although they were not available for examination, the location of the fire suggests that there was a leak in the vicinity of the augmentor tubes and muffler junction, causing the fire to burn through the nacelle rather than exit out the aft end of the muffler.

The left engine was installed on the accident airplane in September 2009. At the time of the accident, it had accumulated about 1,004 hours since the last known major overhaul in 1975. Copies of the maintenance records for the left engine were requested but not provided; therefore, how often or whether the engine was maintained during the 34 years between the known last overhaul and when it was installed on the accident airplane could not be determined. A service check of the engines, including compression check of the cylinders, was last performed 5 days before the accident.

The captain twice decided to depart without reporting or requesting maintenance for the backfiring of the left engine. If maintenance had been accomplished, it is likely that the lack of movement of the two cylinder pistons would have been detected and repaired, thereby preventing the engine fire. Because of the airplane's distance from the airport at the time the flight crew received the local controller's report about black smoke, it is unknown whether fire damage to the brake line would have been mitigated if the captain had decided to return to the airport immediately. However, the captain demonstrated poor judgment in deciding to continue the flight rather than immediately follow up on the report.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The captain's decision to continue the flight with the left engine backfiring, resulting in an engine fire shortly after takeoff. Contributing to the accident were the captain's decision to continue the flight following a report of black smoke trailing the airplane and in-flight fire damage to the left wheel brake system, resulting in a loss of directional control during an emergency landing.

### Findings

<b>Aircraft</b>	Recip eng cyl section - Failure Brake - Damaged/degraded (Factor) Directional control - Attain/maintain not possible (Factor)
<b>Personnel issues</b>	Identification/recognition - Pilot (Cause) Decision making/judgment - Pilot (Factor)

## Factual Information

### HISTORY OF FLIGHT

On January 17, 2011, about 0756 Atlantic standard time, a Convair 340-71, N8277Q, registered to Kestrel, Inc., operated by Tiger Contract Cargo, experienced an in-flight fire aft of the left engine shortly after takeoff from Cyril E. King Airport (STT), St. Thomas, U.S.V.I. Visual meteorological conditions prevailed at the time and a VFR flight plan was filed for the 14 Code of Federal Regulations (CFR) Part 91 positioning flight from STT to Luis Munoz Marin International Airport (SJU), San Juan, PR. The airplane sustained substantial damage and the airline transport pilot and commercial co-pilot were not injured. The flight originated from STT about 0747.

The transcription of communication indicates that the flightcrew established contact with ground control requesting runway 28 and advised the ground controller they were VFR to SJU. The controller cleared the flightcrew to taxi to runway 28, and at 0746:54, the controller cleared the flight for takeoff, which was acknowledged at 0747:05, by a comment from the flightcrew that the flight was, "...rolling runway two eight...." The co-pilot (pilot flying) later stated that after becoming airborne and positive rate of climb was established the call was made to retract the landing gear. The transcription of communications indicates at 0748:44, the local controller advised the flightcrew, "convair seven seven quebec observe a lot of smoke coming from your left engine are you in need of any assistance sir", to which the captain (pilot not flying) stated, "ah no we are fine...." The co-pilot later stated that the captain attributed the smoke trailing from the left engine due to the age of the airplane. The flight continued and the captain later reported that after being notified of smoke coming from the left engine, he decided to send the co-pilot to visually inspect the left engine.

The flight continued and at 0749:04, air traffic control (ATC) communications were transferred to San Juan Combined En Route Approach Control (San Juan CERAP), which was acknowledged by the flightcrew. The controller who had cleared the flight for takeoff and switched ATC communications to San Juan CERAP reported that after doing so when the flight was 1 mile west of the departure end of runway 28, observed flames coming from the rear of the left engine. The controller later stated that the smoke first observed was black in color and the flames observed were bright orange and then red in color.

At 0749:20, the flightcrew attempted to establish contact with San Juan CERAP, but that communication was not acknowledged by the controller. The transcription of communications indicates that at 0749:30, the local controller from STT established contact with San Juan CERAP and asked if the flightcrew of the accident airplane had established contact yet, to which the controller said no. At 0750:04, the flightcrew established contact with San Juan CERAP, and 4 seconds later the local controller informed the San Juan CERAP controller of seeing flames from behind the left engine which was immediately broadcast to the flightcrew, and acknowledged by, "okay eleven."

After being notified of the fire, the co-pilot reported they checked the engine instruments and did not have any indication of a fire. About that time the owner of the company who was airborne in another airplane told them they needed to return. The captain ordered the co-pilot to go into the cabin to visually look at the left engine and after returning to the cockpit informed the captain there was a fire. The captain advised that he executed the procedures for fire checklist and secured the left engine but the fire continued. The flight returned for landing

at STT, and at 0750:50, the pilot of a company airplane reported, "...you definitely have a fire going."

The flight continued towards STT and ATC communications were transferred to STT ATCT. At 0753:21, the flight was cleared to land and 15 seconds later the STT local controller advised the San Juan CERAP controller that the fire rescue vehicles were already positioned and standing by. The captain later reported that while returning to STT, he noticed an issue with the left aileron which the co-pilot assisted with. The airplane was landed on runway centerline at 90 knots, but the flightcrew were unable to stop the airplane. The captain also reported that there was no steering, the brakes were not working properly. During the landing roll the airport fire rescue vehicles followed the airplane while attempting to extinguish the fire and avoiding debris that was separating from the airplane. The airplane departed the right side of the runway, crossed a taxiway and a perimeter road, then went thru the airport perimeter fence and came to rest upright with the nose section over a public road outside of the airport property.

After the airplane came to rest, the flightcrew exited the airplane from the overwing exits, and the fire rescue vehicles converged on the airplane and extinguished the fire reporting it was extinguished "within seconds." The ARFF personnel removed the flightcrew to safety, and immediately secured area until law enforcement support arrived.

#### PERSONNEL INFORMATION

The captain, age 42, holds airline transport, commercial, certified flight instructor, and mechanic certificates. At the airline transport pilot certificate level, he has airplane multi-engine land rating with type ratings in Convair 240, 340, 440, A340, and A440 airplanes. At the commercial level, he has airplane single-engine land category and class rating, and on the flight instructor certificate he has airplane single engine rating. He has airframe and powerplant ratings on his mechanic certificate, and also holds inspection authorization first issued January 24, 2005. He was issued a first class medical certificate with no restrictions or limitations on April 20, 2010.

On the National Transportation Safety Board (NTSB) Pilot/Operator Aircraft submitted by the operator, the captain was reported having 15,130 hours total time, and 6,810 hours total time in the accident make and model airplane, of which 4,150 were as pilot-in-command. In the previous 90 days, he reported 120 hours total time, of which 35 were in the accident make and model airplane, and in the previous 30 days, he reported 42 hours total time of which 11 were in the accident make and model airplane. In the previous 24 hours, he reported 3 hours total time. His last flight review or equivalent including federal air regulation (FAR) 121 or 135 checks was performed on September 23, 2010. The flight review was performed in a Convair C131F airplane.

The co-pilot, age, 66, holds a commercial pilot certificate with airplane single and multi-engine land, instrument airplane ratings. On the commercial pilot certificate he had type ratings in Convair 240, 340, 440, and Douglas DC-3 airplanes; the type ratings were for second-in-command (SIC) only. He was issued a second class medical certificate with a restriction to wear corrective lenses on October 26, 2010.

On the National Transportation Safety Board (NTSB) Pilot/Operator Aircraft submitted by the operator, the co-pilot was reported having 9,828 hours total time, and 237 hours total time in the accident make and model airplane none of which were logged as pilot-in-command. In the

previous 90 days, he reported 90 hours total time in the accident make and model airplane, and in the previous 30 days, he reported 30 hours total time in the accident make and model airplane. In the previous 24 hours, he did not report any flight time. His last flight review or equivalent including federal air regulation (FAR) 121 or 135 checks was performed on June 28, 2010. The flight review was performed in a Convair "340/440" airplane.

#### AIRCRAFT INFORMATION

The airplane was manufactured in 1955, and was removed from military service where it was designated as a C-131F/R4Y-1, which is a military cargo version of the Model 340. Military records were not available for inspection.

In September 1995, the airplane was presented to the FAA Manufacturing Inspection Satellite Office prior to the issuance of a Standard Transport Category Certificate of Airworthiness. During the conformity inspection to the airplane Type Certificate Data Sheet, non-conformance items were noted. In December 1999, a Transport Category Airworthiness Certificate was issued to the Convair 340-71 airplane, manufacturer serial number 282.

The Convair 340-71 airplane is an all-metal, low-wing, pressurized, twin-engine, propeller-driven airplane powered by two 18 cylinder Pratt & Whitney R-2800 engines.

The engines and nacelles are installed on the wings centered at about wing inch station (WIS) 150 and wing bulkhead station (WBS) 7. The nacelles are permanently attached to the wing and consist of three main portions; the power section, the nacelle body section, and the nacelle afterbody section.

The engine exhaust from the 18 cylinders is routed to two manifold assemblies. Each manifold assembly consists of 8 Siamese stacks, 2 single stacks, and 9 port extensions. The Siamese stacks receive the exhaust gases from two cylinders and the single stacks receive the exhaust gas from one cylinder. Each manifold, thus, carries the exhaust gases from 9 cylinders to the augmentor bellmouth located in the upper firewall. The thrust augmentor assemblies extend from the engine firewall aft to the exhaust transition assembly and muffler. They are situated within the nacelle body section above the upper wing skin and are mounted through shock mounts to the upper nacelle body section frames. The cross-sectional area of the augmentor ducts is considerably larger than the total cross-sectional area of the exhaust stacks in the manifold assembly at the bellmouth. This difference in area and the high speed of the exhaust gases entering the augmentors causes a pressure decrease which draws more air through the cowling to provide cooling. The augmentors also act as heat exchangers to transfer the heat from the hot exhaust gases to air entrained in a muff surrounding the augmentor that is then routed for anti-icing and cabin heat. The augmentors attach to the transition assembly with clamps. Augmentor vanes are installed in the transition assembly and can be controlled from the cockpit to control the amount of cooling provided. The transition assembly and muffler are installed together as a unit and form the upper portion of the nacelle afterbody. The exhaust muffler assembly attaches to a beam installed between the inboard flap outboard flap track and the outboard flap inboard flap track through two bolts with shock mounts. The CV-340 airplane was manufactured with twin circular exhaust muffler assemblies, one installed at the aft end of each augmentor, and readily visible at the aft end of the wing.

The airplane was maintained in accordance with a Federal Aviation Administration (FAA) approved aircraft inspection program (AAIP) consisting of a Service Check, "A Pattern Inspection", "B Pattern Inspection", "C Pattern Inspection", "D Pattern Inspection", "E Pattern

Inspection”, and “F Pattern Inspection.” The service check inspection was required to be performed every 50 hours or 30 days, while the A through F pattern inspections were required to be performed at 2 month intervals with a complete full cycle inspection of the airframe performed every 12 months. Additionally, the engines were inspected in accordance with (IAW) 100-Hour inspections.

The “Service Check” consists of running up the engines, looking for fuel, oil and exhaust leaks, and also performing a compression checks of the cylinders.

The last “Service Check” was signed off as being completed on January 12, 2011; the airplane total time at that time was reported to be 17,279.2 hours and the left engine time since major overhaul (SMOH) was reported to be 1,002.1 hours. The last 100-Hour inspection of both engines was reported to have been accomplished on August 15, 2010, at airframe total time of 17,209.9 hours.

According to the “Aircraft Maintenance Report” dated January 12, 2011, the last phase inspection of the airframe was a “D Pattern Inspection” which was reported to have been accomplished last on December 15, 2010, at airframe total time of 17,267.6 hours.

With respect to the left engine installed on N8277Q at the time of the accident, the maintenance records reflect it was S/N P34968.

Records provided by the operator indicate engine S/N P34968 was last overhauled on January 13, 1975, by Gary Aircraft Corporation located in Victoria, Texas. The engine total time at that time of overhaul was reported to be unknown. Additional records pertaining to the engine were repeatedly requested by the operator but they were not provided; therefore, no determination could be made as to what occurred to the engine between the overhaul date and September 11, 2009, at which time the accident engine S/N P34968 was installed onto the left position of the accident airplane. Following installation the engine was test run which was reported to be satisfactory, and the airplane was approved for return to service. At the time of installation, the left engine S/N P34968 had 873.1 hours TSMOH. The airplane total time at the time of the engine installation was reported to be approximately 17, 073. The engine remained installed up to and including the date of the accident.

At the time of the accident, the airframe and left engine TSMOH were 17,281.0, and 1,003.9, respectively.

#### METEOROLOGICAL INFORMATION

A surface observation weather report taken at Cyril E. King Airport on the day of the accident at 0753, or approximately 3 minutes after the flight departed indicates the wind was from 100 degrees at 8 knots, the visibility was 10 miles, and the sky was clear. The temperature and dew point were 24 and 21 degrees Celsius respectively, and the altimeter setting was 30.01 inches of Mercury.

#### COMMUNICATIONS

The flightcrew were initially in contact with the Cyril E. King Airport local control position of the air traffic control (ATC) tower. While in contact with that position, the controller alerted the flightcrew that smoke was trailing the left engine. That communication was acknowledged by a flightcrew member. Subsequently, ATC communications were transferred to St. Thomas Approach Control. The local controller who transferred communications to approach control continued to watch the airplane to include getting a pair of binoculars, and alerted the

approach controller that fire was seen behind the left engine. The approach controller relayed that information to the flightcrew, who acknowledged the transmission. After confirming there was evidence of fire, the flightcrew requested to return and ATC communications were transferred back to local control. The flightcrew remained in contact with the local controller to the point of landing, and at no time were there any reported communication difficulties.

#### AIRPORT INFORMATION

The Cyril E. King Airport is a 139 airport index C, and is equipped with a single asphalt runway designated 10/28, which is 7,000 feet long and 150 feet wide.

Before being officially notified of an "Alert" by air traffic control tower personnel, the Airport Rescue Fire Fighting (ARFF) crew chief(s) observed signs of smoke trailing the left engine during takeoff and placed the firefighters on alert.

After being notified of the inbound emergency, a total of three (3) Airport Rescue Fire Fighting (ARFF) vehicles were prepositioned. These included: ARFF Engine #7, which is a quick response vehicle that was pre-positioned along the western side of taxiway "A", closest to the approach end of runway 10. This vehicle is standard equipped with; 450 pounds of dry chemical and 200 U.S. gallons pre-mixed solution, and it immediately followed aircraft upon landing, trailing aircraft.

The second responding vehicle was ARFF Engine #6, pre-positioned at midpoint of the runway. This vehicle is equipped with 450 pounds of dry chemical and 1,500 U.S. gallons of water. The last equipment was ARFF Engine #5, which was prepositioned at the intersection of taxiway D. This vehicle is equipped with 210 U.S gallons foam, and 1,500 U.S. gallons water. ARFF Engines #6 and 7 joined the pursuit as the accident airplane passed the pre-positioned locations.

The airport remained closed throughout the operation and only re-opened upon removing and securing the airplane to long term parking, removal of debris from runway, and final runway assessment.

#### FLIGHT RECORDERS

The airplane was not equipped, nor was it required to be equipped with a cockpit voice recorder.

#### WRECKAGE AND IMPACT INFORMATION

Postaccident examination of the airplane was performed by the FAA inspector-in-charge (FAA-IIC) along with the operator. The examination revealed significant heat damage to the rear spar of the left wing, and to a flexible hose associated with the left brakes. Additionally, the left aileron primary control cable was noted to be drooping.

Postaccident examination of the left engine was performed by the FAA IIC along with the operator. The examination revealed that both augmentor ducts were in position; however, the transition and muffler was not attached to the augmentor ducts. It had separated during the landing roll and was later recovered. The propeller was feathered, and during subsequent rotation of the propeller, no piston movement was detected in cylinder Nos. 4 and 10. The operator reported to the NTSB that with 2 suspect cylinders, it was likely that unburned fuel ignited in the exhaust which results in an exhaust stack or augmentor tube fire; a very common occurrence. No disassembly inspection of the left engine was performed.

Inspection of the airplane was also performed by a NTSB Fire and Explosion Specialist. According to the Fire Factual Report, the fire damage to the aircraft was limited to the left wing particularly in areas of the engine nacelle aft of the nacelle power section, upper and lower wing spar, the inboard and outboard flaps, associated structure and adjacent compartments. The damage extended from the engine firewall aft to the flaps with large sections of nacelle and flap structure missing. The damage was more severe inboard of the engine when compared to the outboard section of the left wing.

The left main engine oil tank and the two exhaust augmentors are normally located in upper nacelle body section between the engine firewall and the nacelle afterbody section. On the accident aircraft, the oil tank was found mounted to the upper nacelle structure with the two augmentors removed and not available for the inspection. The interior section of the nacelle, the oil tank and the upper wing skin was originally painted with green primer paint. The interior surface of the upper nacelle was discolored and coated with soot and oil residue. The upper wing skin surface, located below the oil tank, was discolored with some areas of blistered and peeling paint, which was not consistent with the paint condition of the same area on the right side of the accident aircraft. On the right side, the primer was only slight darker than the original color and appeared intact and undamaged. A dry bay located directly below the oil tank and augmentors had several sections of burn through. The fire damage extended inboard of the nacelle into the trailing edge of the wing with a section of wing skin missing and signs of thermal exposure to the upper wing spar. The aft bulkhead for the fuel tank, located outboard from the dry bay, appeared to be intact, while the upper and lower nacelle section aft of the wing including the nacelle afterbody were mostly destroyed by fire with a portion of the outboard side still remaining.

Inspection of the left muffler assembly which had separated during the landing roll revealed the interior surface of the muffler assembly was mostly rust-colored with a few areas of heavy sooting. A portion of the assembly cover had been melted away.

#### TESTS AND RESEARCH

The co-pilot reported that earlier that day before departure from SJU, while taxiing for takeoff they noticed a small backfire from the left engine. The captain attributed the backfire to possible water contamination of the fuel as it had rained the night before. During run-up of the left engine before departure there was a little "backfire" when checking the magnetos at 1,700 rpm. The captain said to check that again and the power was reduced then brought back up to 1,700 for another magneto check and during that time the backfiring still occurred. The captain decided to run the engine a little bit more thinking that the backfiring was related to spark plug fouling. They did another run-up of the left engine and no backfiring was noted. The flight departed for STT, and when it was near there, they heard a backfire only one time and immediately checked the engine instruments. The captain landed at STT, and the cargo was off loaded. No maintenance was performed while at STT.



## History of Flight

Prior to flight	Aircraft maintenance event
Takeoff	Powerplant sys/comp malf/fail (Defining event) Fire/smoke (non-impact)
Maneuvering	Flight control sys malf/fail Sys/Comp malf/fail (non-power)
Landing-landing roll	Loss of control on ground

## Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	42, 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):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last Medical Exam:	04/20/2010
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	09/23/2010
Flight Time:	15130 hours (Total, all aircraft), 6810 hours (Total, this make and model), 10090 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 42 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Co-Pilot Information

Certificate:	Commercial	Age:	66, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
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 With Waivers/Limitations	Last Medical Exam:	10/26/2010
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	06/28/2010
Flight Time:	9828 hours (Total, all aircraft), 237 hours (Total, this make and model), 3086 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CONVAIR	Registration:	N8277Q
Model/Series:	340-71	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	282
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	01/12/2011, AAIP	Certified Max Gross Wt.:	47000 lbs
Time Since Last Inspection:	2 Hours	Engines:	2 Reciprocating
Airframe Total Time:	17279 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	Installed, not activated	Engine Model/Series:	R-2800
Registered Owner:	KESTREL INC	Rated Power:	2400 hp
Operator:	TIGER CONTRACT CARGO	Air Carrier Operating Certificate:	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	STT, 23 ft msl	Observation Time:	0753 AST
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	24° C / 21° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	8 knots, 100°	Visibility (RVR):	
Altimeter Setting:	30.01 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Charlotte Amalie, VI (STT)	Type of Flight Plan Filed:	Company VFR
Destination:	San Juan, PR (SJU)	Type of Clearance:	None
Departure Time:	0747 AST	Type of Airspace:	

## Airport Information

Airport:	Cyril E. King Airport (STT)	Runway Surface Type:	Asphalt
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	7000 ft / 150 ft	VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	Both
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	18.337222, -64.973333 (est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Timothy W Monville	<b>Adopted Date:</b>	10/29/2013
<b>Additional Participating Persons:</b>	Manuel Perez; FAA/FSDO; Miramar, FL		
<b>Publish Date:</b>	10/29/2013		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78183">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78183</a>		

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.