Misinterpreted Engine Situation

Morrisville, NC

December 13, 1994

Engine self-recovery light misinterpreted.

Control lost on attempted go-around.

Fatal crash.

The aircraft crashed while executing an ILS approach into Raleigh-Durham. The captain misinterpreted a momentary ignition light to be an engine failure and did not crosscheck the other engine instruments. The aircraft stalled during attempted go-around from a single-engine approach even though the other engine was operating normally. The ground impact and post-crash fire destroyed the aircraft. There were 15 fatalities, including the 2 crewmembers. Thirteen additional passengers received serious injuries.

Attempted Single-Engine Go-Around with Propeller Unfeathered

Schiphol, Netherlands
April 4, 1994

Commuter flight.
Attempted go-around below V_{MCA}.
3 fatalities; 9 serious injuries.

The pilot reduced power to flight idle on the right engine after observing a (false) low oil pressure light in cruise, and returned to Schiphol. The pilot did not feather the propeller. At an altitude of 45 ft, the crew determined the approach was not stabilized and declared a go-around. Airspeed was 110 kt, close to V_{MCA} (103 kts). The pilot used aileron input to combat the airplane yaw; no rudder input was used. Airspeed dropped, and the airplane rolled and yawed to the right until it crashed.

Engine Stoppage during Takeoff due to Fuel Contamination

Perris, California
April 22, 1992

Sport parachute flight.

Inappropriate pilot action following engine failure during takeoff.

16 fatalities; 4 serious injures.

The No. 2 engine stopped at or immediately following liftoff on the second flight of the day. Eight gallons of water had mistakenly been pumped into the airplane's forward fuel tank prior to the occurrence flight. The low-time pilot did not correctly identify the malfunction and failed to "fly the airplane." None of the occupants, other than those in the cockpit (pilot and passenger) were wearing seatbelts. A number of aircraft airworthiness issues were also identified during the on-scene accident investigation. The autofeather and beta back-up systems were inoperative at the time of takeoff, contrary to Minimum Equipment List dispatch requirements.

Fatal Training Accident

Valens, Ontario, Canada
February 27, 1981

Training flight.
Struck ground.
2 fatalities; 1 seriously injured.

sister aircraft

The purpose of the flight was an instrument and proficiency check (IFC/PPC) on the left-seat pilot (PF) in VMC conditions. The check pilot was sitting in the right seat. Part of the check included a simulated overshoot at an altitude (greater than 3,000 ASL) with a simulated engine failure. Engine failures were simulated by shutting down the engine by pulling the fuel lever to the fully aft or to the "OFF" position. The PF was wearing instrument goggles, which simulated IMC conditions and also restricted visibility inside the cockpit. Therefore, the PF was not able to determine the manner in which the right engine was shut down. The third crew member reported seeing the right fuel lever in the OFF position upon feeling a yaw movement and observing that the right propeller was windmilling. Shortly after unusual cockpit activity, it became abnormally quiet, and the crew member observed that the left fuel lever was also in the OFF position. Approximately 600 ft AGL, the crew attempted a restart of the left engine by hitting the starter and placing the fuel lever in the fully forward or ON position. Time did not permit a complete start prior to the aircraft hitting the ground. A ground witness observed that right propeller was stopped and a stream of black smoke was coming from the left engine prior the aircraft striking the ground. The accident was not survivable for the front crew members. The flight deck was crushed back almost to the sloping bulkhead. The third crew member survived with serious injuries.

Birdstrike on Final Approach

Schiphol, Netherlands
July 15th, 1996

Bird ingestion on final approach.
Crashed during attempted go-around.

Engines 1 and 2 ingested birds at the runway threshold. The #3 engine was shut down by the crew; engines 1 and 2 were no longer operating. The crew decided to initiate a go-around at 100 kts; this was below the go-around speed of 134 kts. The airplane yawed and rolled slowly to the left, and then departed controlled flight.

Forced Landing

Baton Rouge, LA

February 1, 1994

Dual engine propeller overspeed and shutdown.

Forced landing, runway over-run.

No injuries.

During the descent, the airplane encountered turbulence. The DFDR shows that the power levers on both engines were then retarded to 15 degrees PLA, below flight idle. At this point, both propellers oversped, resulting in some power turbine damage. Since the engines were unable to produce torque, the pilot shut them both down and made an unpowered landing. The airplane overran the runway and sustained substantial damage.

Uncommanded Autofeather on Takeoff

Bremen, Germany
1992

Aircraft performance issue due to inappropriate pilot action.

Airplane landed uneventfully.

The airplane's No. 2 engine experienced an uncommanded autofeather immediately after liftoff, with takeoff power selected. The flight crew inappropriately reduced power on both engines, in contradiction to AFM procedures. The reduction in engine power deselected the autofeather system and unfeathered the No. 2 propeller. The crew inappropriately responded by reselecting takeoff power on the No. 1 engine, and attempted to climb with idle power on the No. 2 engine and a windmilling, unfeathered propeller. Aircraft performance was significantly reduced by the flight crew's action.

Birdstrike during Approach at V_{MO}

Broome, Australia
May 17, 1996

Loss of directional control during single-engine landing.

Airplane departed runway.

No injuries.

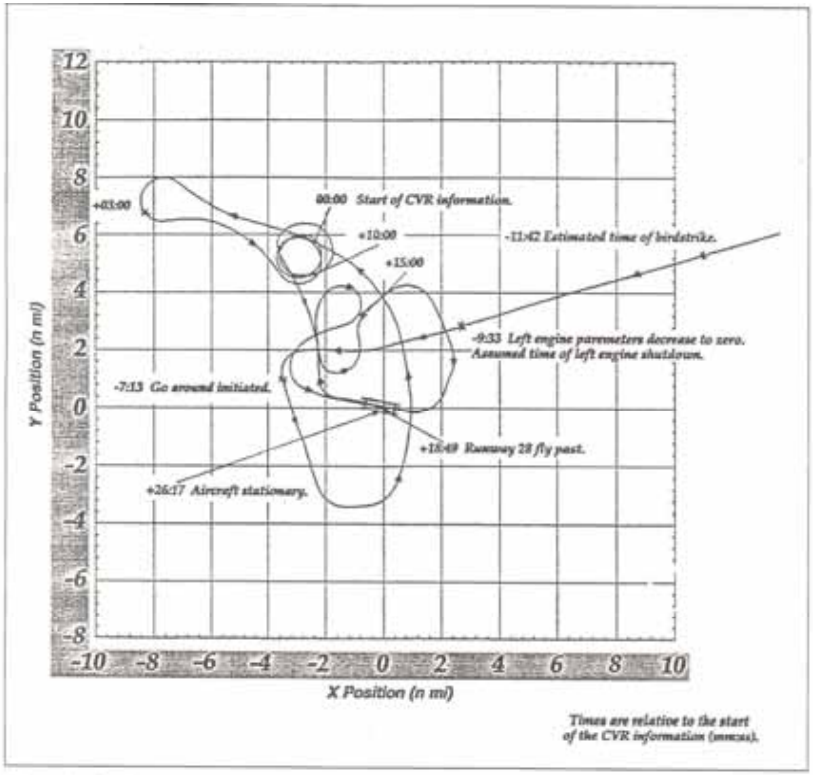

Figure 1. Derived ground track of VH-JSI

The aircraft struck a 25-pound sea eagle during a V_{MO} descent into Broome, Australia. Due to an erroneous engine indication, the flight crew elected to shut down the No. 1 engine. Upon selecting landing gear down, the left main landing gear indicated an "unsafe" condition. The crew failed to notify Broome of the engine shutdown, ignored the alternate landing gear indication system (which indicated that the left MLG was down and locked), and continued for over 30 minutes to discuss the landing gear issue with ground personnel. The flight crew ultimately elected to perform a low-altitude, low-energy single-engine flypast of the control tower to ascertain left MLG position. Aircraft performance was significantly reduced during the single-engine flypast. The airplane ultimately landed and departed the runway due to inappropriate use of single-engine reverse thrust and braking.