



Aviation Investigation Final Report

Location:	Wilmington, North Carolina	Accident Number:	MIA01LA136
Date & Time:	April 28, 2001, 11:12 Local	Registration:	N38261
Aircraft:	Piper PA-32R-300	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Within 3 miles of landing, as the pilot was completing his before landing check list, the engine surged to 2,700 rpm two or three times, and then stopped developing power, completely. The pilot thought his best alternative was a forced landing to a corn field, which was accomplished but the airframe sustained substantial damage. Post crash examination by FAA inspectors revealed adequate fuel was aboard. Examination of engine, fuel, ignition, and airframe components revealed the fuel selector cover assembly was loose, missing mounting screws, and had shifted aft of its designed position. Such a repositioning would render the mechanical safety stop that would prevent an inadvertent switch to "off" inoperative. A search of the aircraft maintenance logs revealed an entry where the aircraft seats, door panels, plastic, and carpeting were removed for replacement or cleaning.

Probable Cause and Findings

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

A total loss of engine power due to the failure of maintenance to properly secure the fuel selector cover, resulting in the pilot inadvertently selecting "off" instead of "left" tank, and the subsequent forced landing to uneven terrain.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING

Findings

1. (C) MAINTENANCE, INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
2. FUEL SYSTEM, FUEL SHUTOFF - DEPLOYED INADVERTENTLY

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On April 28, 2001, about 1112 eastern daylight time, a Piper PA-32RT-300, N38261, registered to ZQJ Corporation, operating as a 14 Title CFR Part 91 personal flight, crashed in the vicinity of Wilmington, North Carolina. Visual meteorological conditions prevailed and a visual flight plan had been filed. The aircraft sustained substantial damage, and the private-rated pilot, the sole occupant, was not injured. The flight departed Newport News, Virginia, about 1 hour 22 minutes before the accident.

According to the pilot, during his in-range descent for New Hanover International Airport, Wilmington, for landing, he selected the fuel boost pump on, enriched the mixture to full rich, switched the fuel selector from the right to the left fuel tank, and advanced the propeller control to full increase as part of his before landing checklist. Engine rpm increased to about 2,700 rpm, began surging, and then the engine stopped developing power. Estimating his position as 3 miles from runway 24, and at an altitude of 1,100 feet msl, he determined his best alternative field was a corn field about 2 to 3 miles short of the airport. The forced landing resulted in substantial damage to the landing gear, wings, and empennage. He confirmed that he saw full fuel tanks during his walk-around inspection before departing Newport News. (The fixed-base operator at Newport News, Rick Aviation, confirmed that N38261 was fuelled with 33.5 gallons of 100LL aviation fuel, and that the amount represented a top-off). The pilot stated that he switched fuel tanks from right to left about 3 minutes before the loss of power.

According to an FAA inspector, on-site examination of the aircraft revealed that neither fuel tank was compromised during the forced landing, and about 30 to 40 gallons of uncontaminated fuel were removed from the left wing tank and about 10 to 15 gallons were removed from the right wing tank. The wreckage was transported to a fixed-base operator on the Wilmington airport where the engine, fuel system, and ignition system were examined for failure or malfunction, with FAA oversight. The fuel selector valve cover assembly was found loose and missing screws that normally secure it to the cockpit floorboards. This allowed the assembly to slide aft of its normal position relative to the mechanical fuel selector handle/arrow point indicator that is attached to the fuel selector valve. The mechanical safety stop is mounted on the valve cover assembly and due to its inadvertent repositioning aft, allowed the fuel selector handle to bypass the mechanical safety stop and allow unobstructed movement all the way to the "off" position, or any position between "left tank" and "off". A pilot who was accustomed to switching his fuel source from right to left tank by simply positioning the fuel selector to the left limit of travel, assuming the safety stop was in place, would, in actuality position the fuel selector to the "off" position. Reference to the aircraft maintenance logbook shows an entry made on July, 26, 1994, indicating that the seats, sidewalls, seatbelts, plastic and carpet were removed for recovering or cleaning. Photographs of the fuel selector valve cover assembly and how the mechanical safety stop was allowed to migrate rearward are an attachment to this report.

Pilot Information

Certificate:	Private	Age:	31, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	September 5, 2000
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 5, 2000
Flight Time:	140 hours (Total, all aircraft), 41 hours (Total, this make and model), 108 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N38261
Model/Series:	PA-32R-300	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	32R-7780408
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	March 15, 2001 Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:	24 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3041 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	IO-540-K1G5D
Registered Owner:	ZQJ Corporation	Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ILM,33 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	11:10 Local	Direction from Accident Site:	210°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.19 inches Hg	Temperature/Dew Point:	24°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Newport News, VA (PHF)	Type of Flight Plan Filed:	VFR
Destination:	Wilmington, NC (ILM)	Type of Clearance:	VFR
Departure Time:	09:50 Local	Type of Airspace:	Class D;TRSA

Airport Information

Airport:	New Hanover International ILM	Runway Surface Type:	Grass/turf
Airport Elevation:	33 ft msl	Runway Surface Condition:	Dry;Rough
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	34.270404,-77.959114(est)

Administrative Information

Investigator In Charge (IIC):	Stone, Alan
Additional Participating Persons:	William R Newby; FAA FSDO; Greensboro, NC
Original Publish Date:	October 23, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52174

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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](#).