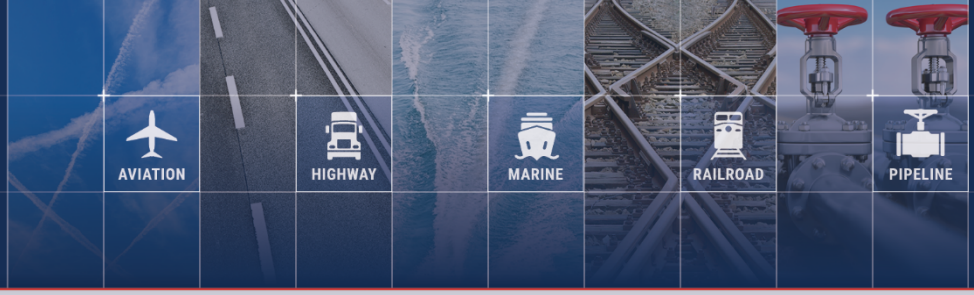

Aviation Investigation Final Report

Location:	West Palm Beach, Florida	**Accident Number:**	ANC04LA043
Date & Time:	March 20, 2004, 17:00 Local	**Registration:**	N6583R
Aircraft:	Piper PA-24-250	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During the first flight after having maintenance performed on the airplane's fuel system, the pilot reported a total loss of engine power in cruise flight. During the flight the pilot and pilot-rated passenger discussed the lack of movement of the right fuel indicator needle with both main tanks in the "ON" position. After the loss of engine power, the pilot asked the more experienced pilot-rated passenger to take the controls for the landing. The airplane landed in a plowed field. After landing, the pilots noted that the right main tank was full, and the left main tank was empty. An inspection of the fuel system found the right fuel selector valve was assembled incorrectly, and actually blocked the flow of fuel from the right main tank when selected to the "ON" position.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The incorrect assembly of the fuel selector valve by maintenance personnel, and the pilot's failure to make a precautionary landing to assess the fuel situation and lack of movement of the right fuel tank indicator. which resulted in fuel starvation and the loss of engine power during cruise flight.

Findings

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

Findings
1. (C) FLUID,FUEL - STARVATION
2. FUEL SYSTEM,SELECTOR/VALVE - REVERSED
3. (C) MAINTENANCE,ALIGNMENT - INCORRECT - OTHER MAINTENANCE PERSONNEL
4. (C) PRECAUTIONARY LANDING - NOT PERFORMED - PILOT IN COMMAND

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

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
5. TERRAIN CONDITION - PLOWED/FURROWED

Factual Information

On March 20, 2004, about 1700 eastern standard time, a Piper PA-24-250 airplane, N6583R, received substantial damage when it collided with terrain about 12 miles northeast of West Palm Beach, Florida, during an emergency landing following a total loss of engine power in cruise flight. The airplane was being operated by the pilot as a visual flight rules (VFR) local personal flight under Title 14, CFR Part 91. The pilot and pilot-rated passenger were not injured. Visual meteorological conditions prevailed, and no flight plan was filed. The flight departed Palm Beach County Park Airport, West Palm Beach, about 1520.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on March 20, the pilot/owner said he was conducting the first flight in the airplane after its release from maintenance. He said the right main fuel tank had been replaced, and the right fuel tank selector had been reconditioned. Additionally, four engine cylinders had been replaced. The pilot/owner said he was flying with the left and right fuel tank selectors in the "main" position, presumably drawing fuel from both main tanks. He said he and the pilot-rated passenger discussed the lack of movement of the right fuel gauge indicator compared to the movement of the left fuel gauge indicator. The pilot/owner stated the right fuel gauge had always been "sluggish," and continued the flight to "run-in" the new engine cylinders. He said 80 minutes into the flight, about 1,200 feet agl, the airplane had a total loss of engine power, and emergency procedures failed to restart the engine. The pilot/owner said he requested the more experienced, commercial certificated flight instructor passenger to take the controls for the landing, which he did. The pilot on the controls selected a road for landing, but was unable to reach the road, and landed in a cultivated field. After landing, both pilots visually inspected the fuel tanks, and noted that the right main fuel tank was full, and the left main fuel tank was empty. The pilot/owner said the airplane sustained damage to both wings, fuselage, tail, landing gear, flaps, and propeller.

During an inspection of the airplane on March 20, the IIC disassembled the recently reconditioned right fuel selector valve. The fuel valve was installed on the selector stem 180 degrees out of the correct position, blocking fuel flow from the right main tank when in the "on" position, and allowing fuel flow only from the left main tank.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	64,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	May 9, 2003
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	April 3, 2002
Flight Time:	3130 hours (Total, all aircraft), 4 hours (Total, this make and model), 2630 hours (Pilot In Command, all aircraft), 114 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Private	**Age:**	46,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	January 29, 2003
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 31, 2003
Flight Time:	329 hours (Total, all aircraft), 187 hours (Total, this make and model), 230 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N6583R
Model/Series:	PA-24-250	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal; Utility	**Serial Number:**	1842
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	February 4, 2004 Annual	**Certified Max Gross Wt.:**	3000 lbs
Time Since Last Inspection:	11 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2811 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-540-B1A
Registered Owner:	RASA Air Inc.	**Rated Power:**	250 Horsepower
Operator:	Ralf Koklar	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.2 inches Hg	**Temperature/Dew Point:**	24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lantana, FL (KLNA)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	15:00 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	26.588888,-80.09333

Administrative Information

Investigator In Charge (IIC):	Lewis, Lawrence
Additional Participating Persons:	Roberto Maldonato; Ft. Lauderdale FSDO-17; Fort Lauderdale, FL
Original Publish Date:	October 28, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=58939