Aviation Investigation Final Report

Location:	Sarasota, Florida	**Accident Number:**	MIA08LA032
Date & Time:	December 26, 2007, 12:50 Local	**Registration:**	N5875Q
Aircraft:	Mooney M20E	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

After takeoff, the pilot climbed to about 300 feet, raised the landing gear and flaps, turned to a heading of 360 degrees, then turned off the fuel pump and verified that the fuel pressure was in the green arc. After 2 seconds the engine ran roughly. He turned the fuel pump back on and leveled the airplane at 400 to 500 feet. He declared an emergency, lowered the landing gear and, with the engine continuing to surge/barely run, he turned the airplane, banking about 50 to 60 degrees in an attempt to make runway 14. The airplane stalled and collided with the ground. Examination of the engine found a large amount of granular debris clogging the fuel servo filter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to contamination in the fuel filter.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (C) FUEL SYSTEM,FILTER - CONTAMINATION
2. MAINTENANCE,INSPECTION - NOT REQUIRED - OTHER MAINTENANCE PERSONNEL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
3. TERRAIN CONDITION - RUNWAY
4. STALL - INADVERTENT - PILOT IN COMMAND

Factual Information

On December 26, 2007, at 1250 eastern standard time, a Mooney M20E, N5875Q, registered to Rime Development LLC, operated by a commercial pilot, collided with the ground following a loss of engine power during take off at the Sarasota/Bradenton International Airport (SRQ) in Sarasota, Florida. The personal flight was operated under the provisions of 14 Code of Federal Regulations (CFR) Part 91 with an Instrument Flight Rules (IFR) flight plan filed. Visual meteorological conditions prevailed. The pilot and passenger received minor injuries and the airplane sustained substantial damage. The flight was originating at the time of the accident.

According to a Federal Aviation Administration (FAA) Inspector, the pilot stated that following the preflight check, and during his taxi, he performed an engine magneto check, cycled propeller, set trim for takeoff, turned on fuel pump and checked control movements. When given clearance for takeoff on runway 32, the pilot estimated that the airplane had been running for about 10 minutes with no discrepancies noted. After takeoff, he climbed to about 300 feet, raised the landing gear and flaps, turned to a heading of 360 degrees and turned off the fuel pump and verified that the fuel pressure was in the green arc. After 2 seconds the engine ran roughly. He turned the fuel pump back on, leveled the airplane which he estimated to be 400 to 500 feet. He declared an emergency, lowered the landing gear, and felt that his best option was to turn to land on runway 14. The engine continued to surge/barely run. He turned the airplane, banking about 50 to 60 degrees in an attempt to make runway 14. He did not hear the stall horn. He experienced a loss of airspeed while continuing to turn until the left wing contacted the ground.

Examination of the airplane by the FAA on site, found 6 and one half quarts of oil remaining in the crankcase. Fuel was present at the fuel servo inlet line. Both propeller blades had equal contact damage. The starter bendix was engaged on the ring gear. The engine could be rotated and continuity was verified with the engine accessory gears. Damage to the airplane consisted of the left wing, engine firewall, and airframe structure.

On April 16, 2008, at a recovery facility in Griffin, Georgia, the engine was further examined by the National Transportation Safety Board. Examination of the engine found that the engine rotated freely and had continuity through the accessory section. Examination of the servo fuel injector found a large amount of granular debris clogging the fuel servo filter. The fuel selector/gascolator filter was clean. Inspection of the engine driven fuel pump found a small amount of granular debris similar to that observed in the fuel servo filter.

Pilot Information

Certificate:	Commercial; Private	**Age:**	42,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	August 27, 2007
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	June 1, 2007
Flight Time:	1891 hours (Total, all aircraft), 1081 hours (Total, this make and model), 1300 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N5875Q
Model/Series:	M20E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	802
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 8, 2007 Annual	**Certified Max Gross Wt.:**	2575 lbs
Time Since Last Inspection:	51.1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5350.3 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-360-A1A
Registered Owner:	On file	**Rated Power:**	200 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SRQ,30 ft msl	**Distance from Accident Site:**	
Observation Time:	12:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 1700 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 4200 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	20°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	20°C / 15°C
Precipitation and Obscuration:			
Departure Point:	Sarasota, FL (SRQ)	**Type of Flight Plan Filed:**	IFR
Destination:	Brooksville, FL (BKV)	**Type of Clearance:**	IFR
Departure Time:	12:50 Local	**Type of Airspace:**	

Airport Information

Airport:	Sarasota/Bradenton Intl SRQ	**Runway Surface Type:**	Asphalt
Airport Elevation:	30 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	32	**IFR Approach:**	None
Runway Length/Width:	9500 ft / 150 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor	**Latitude, Longitude:**	27.390556,-82.55278

Administrative Information

Investigator In Charge (IIC):	Wilson, Ralph
Additional Participating Persons:	Mark V Keefer; FAA/FSDO; Tampa, FL
Original Publish Date:	January 14, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=67307