Aviation Investigation Final Report

Location:	TIJERAS, New Mexico	**Accident Number:**	FTW95LA153
Date & Time:	April 2, 1995, 19:30 Local	**Registration:**	N4478H
Aircraft:	MOONEY M20J	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE AIRPLANE WAS IN CRUISE FLIGHT IN INSTRUMENT METEOROLOGICAL CONDITIONS WHEN THE ENGINE SUDDENLY BEGAN RUNNING ROUGH, THEN LOST ALL POWER. THE PILOT ATTEMPTED TO RESTORE POWER, BUT WAS UNSUCCESSFUL. HE COULD NOT REMEMBER IF HE SWITCHED FUEL TANKS. HE MADE A FORCED LANDING ON A MOUNTAIN ROAD. DURING THE LANDING ROLL, THE LEFT WING STRUCK A PARKED CAR. THE FUEL SELECTOR WAS FOUND POSITIONED ON THE LEFT FUEL TANK. THE LEFT FUEL TANK FINGER SCREEN WAS FOUND TO BE BLOCKED BY GREEN LEAVES. THE ENGINE OPERATED SUCCESSFULLY AT FULL POWER AFTER THE FUEL SCREEN WAS CLEANED AND REINSTALLED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FUEL STARVATION DUE TO FOREIGN MATERIAL PARTIALLY BLOCKING THE FUEL SCREEN, AND THE PILOT'S FAILURE TO SWITCH FUEL TANKS. A FACTOR WAS THE LACK OF SUITABLE TERRAIN FOR THE FORCED LANDING.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) FUEL SYSTEM,SCREEN - BLOCKED(PARTIAL)
2. (C) FUEL SYSTEM,SCREEN - FOREIGN MATERIAL/SUBSTANCE
3. (C) FLUID,FUEL - STARVATION
4. (C) FUEL TANK SELECTOR POSITION - IMPROPER - PILOT IN COMMAND

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

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - ROLL

Findings
5. (F) TERRAIN CONDITION - NONE SUITABLE
6. OBJECT - VEHICLE

Factual Information

On April 2, 1995, approximately 1930 mountain daylight time, a Mooney M20J, N4478H, was substantially damaged when it collided with an automobile during a forced landing near Tijeras, New Mexico. The commercial pilot and automobile occupant were not injured. Visual meteorological conditions prevailed.

The following is based on the pilot/operator report. The airplane had been flying at 12,000 feet MSL (above mean sea level) in instrument meteorological conditions with occasional light rain. As the airplane emerged into visual meteorological conditions, the pilot noticed the cylinder head and exhaust gas temperature gauges had "dropped off the scale." He adjusted the mixture and the instrument readings began to return to normal. Shortly thereafter, the engine began to run rough and lost power.

The pilot's efforts to restore engine power were unsuccessful. He declared an emergency with Albuquerque Approach Control, then made a forced landing in mountainous terrain on New Mexico Highway 337. During the landing roll, the left wing tip struck a parked car.

After relating these events to a Federal Aviation Administration (FAA) inspector, the pilot said he did not remember if he had switched fuel tanks in his attempt to restore engine power. The fuel selector was found positioned on the left fuel tank.

At the request of the pilot, the airplane was transported to Clearlake, California, for repairs. In the presence of an FAA airworthiness inspector, the engine was functionally tested on August 23, 1995. During the first test, the engine ran rough at high power settings (2,650 RPM and 26 to 28 inches of manifold pressure), and the fuel pressure fluctuated between 5 an 14 pounds per square inch (psi). During the second test, engine power again ran rough at a high power setting (2,600 RPM, 25 inches manifold pressure). Fuel pressure was 3 psi. When the fuel boost pump was turned on, fuel pressure rose to 5 psi. The right fuel tank was selected and the engine ran smoothly. When the fuel selector was switched back to the left tank, the engine ran rough.

The left fuel tank finger screen was removed and found to be plugged with what was described as "leaf roller bug." After the finger screen was cleaned and reinstalled, the engine was tested again and operated smoothly at all power settings on both the left and right fuel tanks.

Pilot Information

Certificate:	Commercial	**Age:**	27,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--w/ waivers/lim	**Last FAA Medical Exam:**	May 12, 1994
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	490 hours (Total, all aircraft), 75 hours (Total, this make and model), 418 hours (Pilot In Command, all aircraft), 38 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MOONEY	**Registration:**	N4478H
Model/Series:	M20J M20J	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-0745
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 19, 1994 Annual	**Certified Max Gross Wt.:**	2740 lbs
Time Since Last Inspection:	83 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1223 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-A3B6D
Registered Owner:	JEFFREY KLAIN	**Rated Power:**	200 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dusk
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 2000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Unknown	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	4°C
Precipitation and Obscuration:	Light - Showers - Rain		
Departure Point:	LAS VEGAS , NM (LVS)	**Type of Flight Plan Filed:**	IFR
Destination:	FORT HUACHUCA , AZ (FHU)	**Type of Clearance:**	IFR
Departure Time:	15:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	
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:**	35.080318,-106.369461(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	DOUGAS H HAWLEY; ALBUQUERQUE , NM
Original Publish Date:	November 30, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=19380