Aviation Investigation Final Report

Location:	ST. LUCIE, Florida	**Accident Number:**	MIA00LA242
Date & Time:	August 19, 2000, 10:58 Local	**Registration:**	N54403
Aircraft:	Ryan ST3KR	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated he was in cruise flight at 1,000 feet when he experienced a decrease in engine rpm. He applied carburetor heat and the rpm increased. About 5 minutes later, the engine experienced another decrease in engine rpm. He made a forced landing to a highway and collided with a tree. Examination of the engine assembly could not determine the reported partial loss of engine power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper judgment to conduct a precautionary landing when he first experienced a partial loss of engine power, and his subsequent failure to maintain a visual lookout during a forced landing resulting in an in-flight collision with a tree. Contributing to the accident was a reported partial loss of engine power for undetermined reasons.

Findings

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

Findings
1. (F) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING

Findings
2. OBJECT - TREE(S)
3. (C) JUDGMENT - IMPROPER - PILOT IN COMMAND
4. PRECAUTIONARY LANDING - NOT PERFORMED - PILOT IN COMMAND
5. (C) VISUAL LOOKOUT - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On August 19, 2000, at about 1058 eastern daylight time, a Ryan ST3KR, N54403, registered to GVS Corporation, operating as a 14 CFR Part 91 personal flight crashed during a forced landing in the vicinity of St. Lucie, Florida. Visual meteorological conditions prevailed and no flight plan was filed. The airplane sustained substantial damage. The airline transport rated pilot-in-command (PIC), and commercial pilot-rated passenger reported no injuries. The flight originated from Fort Pierce, Florida, about 28 minutes before the accident.

The PIC stated they were in cruise flight at 1,000 feet when he experienced a partial loss in engine power (rpm decreased to 1,000 rpm). He immediately turned on the carburetor heat, the rpm increased, and he continued with the flight. About 5 minutes later, he experienced a second partial loss of engine power and elected to make a forced landing to a highway. On final approach he observed power lines and cleared them. On touchdown the right wing collided with a tree at about mid wing. The airplane rotated to the right and turned over inverted. The pilot stated in the NTSB pilot/Operator aircraft Report that after lining up with the road he observed numerous automobiles facing him. He applied right rudder to avoid traffic when the right wing collided with a pine tree and a sable palm tree. The airplane yawed to the right followed by the left wing impacting another tree. The fuselage rolled over up against a tree inverted.

Examination of the engine assembly could not determine the source of the reported loss of engine rpm. Fuel was present in the fuel tank, and the fuel tank vent was clear and the fuel cap was properly vented. No fuel was present in the gascolator, and the drain valve was found in the off position. The fuel selector valve was found in the reserve position and functioned normally when activated. The fuel strainer contained about 6 ounces of fuel and did not appear to be water contaminated. The fuel inlet screen on the carburetor was clean and the carburetor float bowl did not contain fuel. Compression and valve train continuity of the engine was established on all cylinders, and the impulse coupling equipped magneto supplied spark to all cylinders at the forward spark plugs. The aft row of spark plugs could not be checked due to the limited rotational speed provided by hand cranking. (For additional information see FAA Aviation Safety Inspector statement, an attachment to this report.)

Pilot Information

Certificate:	Airline transport	**Age:**	59,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Balloon	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	July 6, 2000
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	29600 hours (Total, all aircraft), 150 hours (Total, this make and model), 30 hours (Last 90 days, all aircraft), 45 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ryan	**Registration:**	N54403
Model/Series:	ST3KR ST3KR	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1387
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	September 10, 1999 Annual	**Certified Max Gross Wt.:**	1860 lbs
Time Since Last Inspection:	184 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4120 Hrs	**Engine Manufacturer:**	Kinner
ELT:		**Engine Model/Series:**	R-56
Registered Owner:	GARY V. SNODGRASS	**Rated Power:**	160 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:**	Day
Observation Facility, Elevation:	SUA ,18 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	11:03 Local	**Direction from Accident Site:**	220°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	50°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	33°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	FORT PIERCE , FL (FPR)	**Type of Flight Plan Filed:**	None
Destination:	STUART , FL (SUA)	**Type of Clearance:**	None
Departure Time:	10:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

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:**	27.190967,-80.190742(est)

Administrative Information

Investigator In Charge (IIC):	Smith, Carrol
Additional Participating Persons:	JAMES S GUEST; ORLANDO FSDO , FL
Original Publish Date:	March 2, 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=50035