



Aviation Investigation Final Report

Location:	Marshall, Michigan	Accident Number:	CEN20LA216
Date & Time:	June 7, 2020, 15:13 Local	Registration:	N827WS
Aircraft:	Team 1600R	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot departed from a campground area in the single-engine experimental airplane. During the airplane’s initial climb, the engine lost power and the pilot made a forced landing into a cornfield, which substantially damaged both wing struts.

Postaccident examination of the engine revealed a loose fuel supply line to the inlet fitting of the vacuum-driven fuel pump. Although the clamp on the inlet fitting was tightened to its maximum clamping position, it was not the correct size, and the fuel supply line was still loose in the fitting. Thus, it is likely that maintenance personnel did not ensure an airtight fitting with a properly sized clamp, which allowed air to enter the fuel supply line and resulted in a loss of engine power.

Probable Cause and Findings

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

Maintenance personnel’s improper installation of an improperly sized clamp on the fuel supply line, which allowed air to enter the supply line, a subsequent loss of engine power, and a forced landing.

Findings

Personnel issues	(general) - Maintenance personnel
Aircraft	(general) - Incorrect service/maintenance

Factual Information

History of Flight

Initial climb	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing

On June 7, 2020, about 1513 eastern daylight time, a Team Mini-Max 1600R airplane, N827WS, was substantially damaged when it was involved in an accident near Marshall, Michigan. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the pilot, the engine lost total power during initial climb after departing from a campground area. The pilot made a forced landing into a cornfield, which damaged both wing struts.

During the flight prior to the accident, the pilot noticed engine roughness that discontinued after he turned the fuel pump on. The pilot inspected the airplane after landing but was not able to find a rationale for the engine roughness.

Following the accident, examination of the engine revealed that the fuel supply line to the inlet fitting of the vacuum driven fuel pump was loose on the fitting. Although the clamp on the inlet fitting had been tightened to its maximum clamping position, the fuel supply line was still loose on the fitting and without a proper seal it was possible for air to enter the fuel system.

Pilot Information

Certificate:	Private	Age:	25, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	July 17, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 24, 2019
Flight Time:	62 hours (Total, all aircraft), 5 hours (Total, this make and model), 21 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Team	Registration:	N827WS
Model/Series:	1600R No Series	Aircraft Category:	Airplane
Year of Manufacture:	2017	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special); Experimental light sport (Special)	Serial Number:	08162017CJS
Landing Gear Type:	Tricycle	Seats:	1
Date/Type of Last Inspection:	June 7, 2020 Condition	Certified Max Gross Wt.:	560 lbs
Time Since Last Inspection:	0 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	447
Registered Owner:	On file	Rated Power:	40 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:	KRMY,941 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	14:55 Local	Direction from Accident Site:	79°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	23°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Marshall, MI (PRIV)	Type of Flight Plan Filed:	None
Destination:	Marshall, MI (PRIV)	Type of Clearance:	None
Departure Time:	15:12 Local	Type of Airspace:	Class G

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:	42.245834,-84.991111

Administrative Information

Investigator In Charge (IIC):	Folkerts, Michael
Additional Participating Persons:	Robert Helbring; Flight Standards District Office; Grand Rapids, MI
Original Publish Date:	May 5, 2021
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101401

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