Aviation Investigation Final Report

Location:	Roche Harbor, Washington	**Accident Number:**	WPR18LA259
Date & Time:	September 12, 2018, 08:10 Local	**Registration:**	N24ME
Aircraft:	Cessna 172	**Aircraft Damage:**	Substantial
Defining Event:	Preflight or dispatch event	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot reported that he adjusted his seat and "wiggled it" prior to takeoff to ensure it was locked in place. However, during the takeoff roll, the seat moved all the way aft, and the pilot was not able to reach the throttle or the rudder pedals. The airplane veered to the left and lifted off the ground. Shortly after, the tail struck the ground, followed by the left wing, and the airplane came to rest on its nose.

A postaccident examination of the seat rail and latching mechanism revealed no anomalies. There was proper hole engagement with the seat pin and holes in the seat rail; the seat did not move once the stop was engaged with the hole. Therefore, it is likely that although the pilot attempted to secure his seat before takeoff, the seat pin was likely not engaged in the corresponding hole in the seat rail, which resulted in its aft movement when the airplane gained speed during the takeoff roll.

Probable Cause and Findings

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

The pilot's failure to secure his seat position prior to takeoff, which resulted in a loss of airplane control and subsequent hard landing.

Findings

Personnel issues	Incomplete action - Pilot
Aircraft	Fasteners - Incorrect use/operation
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Prior to flight	Preflight or dispatch event (Defining event)
Takeoff	Loss of control on ground

On September 12, 2018, at 0810 Pacific daylight time, a Cessna 172 airplane, N24ME, was substantially damaged when it was involved in an accident near Roche Harbor, Washington. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 positioning flight.

According to the pilot, just prior to takeoff, he adjusted his seat and "wiggled it" to ensure it was locked. During the takeoff roll, the seat moved all the way aft, and the pilot was not able to reach the throttle or the rudder pedals. The airplane veered to the left and lifted off the ground. Shortly after, the tail struck the ground, followed by the left wing, and the airplane came to rest on its nose.

A Federal Aviation Administration (FAA) inspector responded to the accident site. The FAA inspector observed the pilot's seat in the farthest aft position with the stops engaged in the aft holes. He further reported that the seat moved freely in both directions, to each stop, with no binding encountered. Additionally, there was proper hole engagement with the seat pin and holes in the seat rail; the seat did not move once the stop was engaged with the hole.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	48,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider	**Restraint Used:**	Unknown
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Glider; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	February 21, 2018
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 5030 hours (Total, all aircraft), 0 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N24ME
Model/Series:	172 S	**Aircraft Category:**	Airplane
Year of Manufacture:	2000	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	172S8463
Landing Gear Type:	Tricycle	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	2299 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	IO-540 SER
Registered Owner:		**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KFHR,112 ft msl	**Distance from Accident Site:**	7 Nautical Miles
Observation Time:	07:53 Local	**Direction from Accident Site:**	141°
Lowest Cloud Condition:	Unknown	**Visibility**	0.5 miles
Lowest Ceiling:	Overcast / 400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.92 inches Hg	**Temperature/Dew Point:**	13°C / 12°C
Precipitation and Obscuration:			
Departure Point:	Roche Harbor, WA	**Type of Flight Plan Filed:**	None
Destination:	Bellingham, WA (BLI)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Roche Harbor WA09	**Runway Surface Type:**	Asphalt
Airport Elevation:	100 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	25	**IFR Approach:**	None
Runway Length/Width:	3593 ft / 30 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	48.61222,-123.13861(est)

Administrative Information

Investigator In Charge (IIC):	Cornejo, Tealeye		
Additional Participating Persons:	Lawrence Tolentino; Federal Aviation Administration; Des Moines, WA		
Original Publish Date:	April 18, 2022	**Investigation Class:**	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98285		