NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, DC 20594

November 14, 2012

On Board Image Recorder

Specialist's Factual Report
By Bill Tuccio

1. EVENT

Location:	Kenai, Alaska
Date:	July 14, 2012, 1515 Alaska Daylight Time (ADT)
Aircraft:	Piper PA-18-150, N7154Z
Operator:	Private
NTSB Number:	ANC12LA075

2. GROUP

A group was not convened.

3. SUMMARY

On July 14, 2012, about 1515 Alaska daylight time (ADT), a float-equipped Piper PA-18 airplane, N7154Z, sustained substantial damage during a forced landing shortly after takeoff from a remote lake about 6 miles north of Kenai, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country personal flight under Title 14, Code of Federal Regulations Part 91, when the accident occurred. The pilot and the sole passenger were not injured. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight was en route to the Lake Hood Seaplane Base, Anchorage, Alaska. A DVD was sent to the National Transportation Safety Board's Image Laboratory for readout.

4. DETAILS OF INVESTIGATION

On August 16, 2012 the NTSB Vehicle Recorder Division's Image Laboratory received a DVD containing photographs and video.

4.1. DVD Description

The DVD contained two video files, and three digital photographs. Two of the digital photographs taken from the air were not pertinent to the investigation. The remaining items are described in this report.

4.2. File Description

The metadata contained in the digital files indicated the digital images were taken by an iPhone 3GS on July 14, 2012.

4.3. Summary of Recording Contents

In agreement with the Investigator-In-Charge, a video group did not convene and only this summary report was prepared.

4.3.1. Digital Photograph

The digital photograph of the accident aircraft is shown in figure 1. The metadata of the photograph indicated the photo was taken July 14, 2012 at 15:07 ADT. The aircraft is beached at a lake shore with the engine off. Figure 2 provides increased resolution of the propeller of the accident aircraft, excerpted from the same digital photograph.

Figure 1. Digital photograph of accident aircraft.

Figure 2. Propeller excerpt.

4.3.2. Video Recording One: Landing

The metadata of this video recording indicated the video was taken on July 14, 2012 at 12:50 ADT. The 1 minute, 5 second video records an approach and landing of the accident aircraft on a lake, taken from the vantage point of the rear seat passenger. The video field of view captures the back of the pilot in the front seat, who is wearing a headset and a life vest. The inflight visibility was good and there was a broken to overcast layer of clouds well above the aircraft. The aircraft landed uneventfully on flat, calm water. The recording ended shortly after the landing, as the aircraft slowed to a taxi.

4.3.3. Video Recording Two: Accident Take-Off

The accident flight video was about 2 minutes and 13 seconds in duration. Prior to the crash, the vantage point was from the back seat, pointed mostly forward and left. Throughout the video, the field of view changed as the camera was moved. Times are expressed in elapsed time.

As the accident flight video began, the camera field of view was forward and to the left. The engine of the aircraft was running, and the aircraft was moving slowly through the water. The lake water condition consisted of ripples to small wavelets. The sky and visibility were similar to the conditions described in

"Video Recording One." As the camera panned out the left side of the aircraft, the water was visible, impacting the left float consistent with a water taxi.

At 11 seconds, the sound of the engine increased substantially as the pilot's left hand was advancing the throttle. The water impacting the front of the left float increased in intensity as the aircraft accelerated.

By about 17 seconds, the aircraft had accelerated sufficiently that the front of the left float no longer had water splashing against it, consistent with the aircraft transitioning from or being in the step phase of the take-off. At 21 seconds, the side of the left float still exhibited splashing water.

Between 31 and 35 seconds, the aircraft attitude and acceleration were similar to the aircraft lifting-off from the water.

At 35 seconds, the pilot moved his left hand off the throttle to close the window. The airspeed indicator was visible and indicated 40, although the units (i.e., knots or miles per hour) could not be determined. After closing the window, the pilot moved his hand onto his left knee.

At 40 seconds, the airspeed had increased to 50 and the aircraft was in flight, climbing, off of the water.

At 45 seconds, the pilot moved his hand from his left knee back onto the throttle.

At 48.5 seconds, the video image began to vibrate coincident with an irregular engine sound, though still similarly loud as during the prior frames. By 50 seconds, the camera field of view became obscured by various interior parts of the aircraft, such as the seat pocket in front of the rear seat passenger.

At about 54 seconds, the engine noise decreased substantially, as did the vibration evidenced by the video images.

At about 56 seconds, the camera angle panned left, showing the left wing, wing struts, flaps, and ailerons. The camera angle was such that the left float was not visible, but the water surface was.

At about 57 seconds, the aircraft impacted the water and the camera field of view became obscured.

By 1 minute, 4 seconds, the engine and air sound had decreased, similar to the aircraft coming to a stop. Rustling could be heard in the cockpit as the erratic video captured images of the pilot and passenger beginning to exit the aircraft.

By 1 minute, 32 seconds, both the pilot and passenger had exited the aircraft. The pilot was standing in shallow water. The video ended shortly thereafter.

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