

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, DC 20594

March 28, 2016

Onboard Image Recorder

Specialist's Factual Report
By Sean Payne

1. EVENT

Location:	Clark, South Dakota
Date:	July 14, 2015
Aircraft:	Air Creation Clipper 582, Registration No. N/A
Operator:	Private
NTSB Number:	CEN15LA306

2. GROUP

A group was not convened.

3. SUMMARY

On July 14, 2015, about 1552 central daylight time (CDT), an Air Creation model Clipper 582, an unregistered weight-shift control aircraft, was substantially damaged when it impacted terrain shortly after takeoff from Clark County Airport (8D7), Clark, South Dakota. The uncertificated pilot and his passenger sustained serious injuries. The flight was conducted under the provisions of 14 *Code of Federal Regulations* Part 91 without a flight plan. Day visual meteorological conditions prevailed for the local flight that was originating at the time of the accident.

4. DETAILS OF INVESTIGATION

On July 16, 2015, the National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following two video files from an unknown personal electronic device.

Recorder Manufacturer/Model:	Unknown
Filename(s):	VIDEO0018.mp4 VIDEO0019.mp4

4.1. Video Files

The two files received were of .mp4¹ format and were 1920 x 1080 pixels in resolution recorded at a frame rate of 30 frames per second (fps). The recording was made in a 16:9² vertical format. The recording was in color and also contained a stereo audio track recorded at a bitrate of 208kbps and sample rate of 48kHz. VIDEO0018.mp4 was 9 seconds in length and captured a preflight portion of the aircraft's operation as it was taxiing. VIDEO0019.mp4 was 21 seconds in length and captured a portion of the takeoff roll, climbout and the aircraft's impact with the ground. VIDEO0019.mp4 ended as the aircraft impacted the ground.

Both video files were taken by the rear seat passenger using the device in a handheld manner. The field of view of both recordings shows the front seat operator and a view of the right side of the weight-shift control aircraft. Partially in the field of view was the weight-shift control bar, the right wing, and right main landing gear. Earth and sky are visible in various portions of both recordings.

4.2. Timing and Correlation

Timing of the transcript is expressed as video elapsed time, which is time from the beginning of the recording. The time format used in this report is expressed as MM:SS, where MM is the amount of elapsed minutes and SS is the amount of elapsed seconds.

4.3. Summary of Recording Contents

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

4.3.1. Video Recording One: VIDEO0018.mp4

The recording shows the weight-shift control aircraft taxiing on an unknown portion of the airport. The engine is heard operating at a low power setting as the weight-shift control aircraft moves along the taxiway at a moderate pace. The front seat operator is seen looking over his shoulder to the right and holding the weight-shift control bar. Cables associated with the weight-shift control bar appear to be intact and connected properly to the control bar. The video ends at 00:09. No anomalies that would have precluded normal operation of the weight-shift control aircraft were noted.

4.3.2. Video Recording Two: VIDEO0019.mp4

The recording began with the weight-shift control aircraft on takeoff roll on what appeared to be a runway. The view from the rear passenger's recorder is forward and over the right shoulder of the front seat operator. The front seat operator was seen actively manipulating the weight-shift control bar. The same cable

¹ MPEG-4 Part 14 - a digital multimedia format most commonly used to store video and audio.

² 16:9 – an aspect ratio with a width of 16 units and a height of 9.

attachments to the weight-shift control bar observed in VIDEO0018.mp4 were also observed in the same manner. The audio track recorded the weight-shift control aircraft at a high power setting. The audio track revealed the engine was running steadily.

Around 00:03, the weight-shift control aircraft had become airborne. By 00:06, the camera's view had become more forward and beyond the right shoulder of the front seat operator. The nose of the weight-shift control aircraft was visible. The operator's right hand is seen manipulating the weight-shift control bar. A small round green light is seen illuminated on the weight-shift control aircraft's front control panel area.

By 00:07, the weight-shift control aircraft was seen rolling slightly to the left. The rear seat passenger's recording began to become unstable and the field of view changed to show ground and sky off the right wing of the aircraft. By 00:09, the rear seat camera operator's field of view had become more aft and the right wing tip of the weight-shift control aircraft came into view. Between 00:09 and 00:15, the camera's field of view moved in various directions to the right side of the weight-shift control aircraft. The wingtip can be seen mostly level with the horizon throughout this time interval.

Between 00:15 and 00:16, the weight-shift control aircraft began an abrupt roll to the left. The right wingtip is seen well above the horizon. By 00:16, the right main wheel comes into view and is almost level with the horizon. Around 00:17, an abrupt change in engine power was noted on the audio track. The engine sound was consistent with a reduction of engine power. The audio track continued to record the engine at a low power setting for the remainder of the recording.

By 00:19, only the right main wheel is visible against the sky, indicating the aircraft was in a steep left bank. Between 00:19 and 00:21, the horizon was visible only occasionally. When the horizon was in frame, the right main wheel was seen above the horizon. This was noted until impact at 00:21. The recording ended at 00:21 as the impact sequence began.