

**NATIONAL TRANSPORTATION SAFETY BOARD
Office of Research and Engineering
Vehicle Recorder Division
Washington, D.C. 20594**



GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

WPR19FA230

**By
Nick Swann**

WARNING

The reader of this report is cautioned that the transcript of a cockpit voice recorder audio recording is not a precise science but is the best product possible from a Safety Board group investigative effort. The transcript or parts thereof, if taken out of context, could be misleading. The transcript should be viewed as an accident investigation tool to be used in conjunction with other evidence gathered during the investigation. Conclusions or interpretations should not be made using the transcript as the sole source of information.

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division

March 4, 2022

Cockpit Voice Recorder

Group Chairman's Factual Report By Nick Swann

1. EVENT SUMMARY

Location: Oroville, CA
Date: August 21, 2019
Aircraft: Cessna 560XL, Registration N91GY
Operator: Delta Private Jets
NTSB Number: WPR19FA230

On August 21, 2019, about 1132 Pacific daylight time, a Cessna 560XL airplane, N91GY, overran the departure end of runway 2 following a rejected takeoff from Oroville Municipal Airport (OVE), Oroville, California. The two airline-transport pilots and 8 passengers were not injured. The airplane was destroyed by a post-crash fire that consumed a majority of the airplane. The airplane was registered to Jotts LLC, and was operated by Delta Private Jets, as a Title 14 *Code of Federal Regulations* Part 135 on-demand charter flight. Visual meteorological conditions prevailed, and an instrument flight rules flight plan was filed. The flight was originating at the time of the accident and was destined for Portland International Airport (PDX), Portland, Oregon. A solid-state cockpit voice recorder (CVR) was sent to the National Transportation Safety Board (NTSB) Vehicle Recorder Division for evaluation. The CVR group meeting convened on September 23, 2019 through September 24, 2019 and a partial transcript was prepared for the 2-hour digital recording (see attached).

2. GROUP

Chairman: Nick Swann
Recorder Specialist
National Transportation Safety Board

Member: Joshua Cawthra
Investigator in Charge (IIC)
National Transportation Safety Board

Member: Adam Gerhardt
Operations Group Chairman
National Transportation Safety Board

Member: Patrick Lusch
Air Safety Investigator
Federal Aviation Administration

Member: Captain Donald Louis Coulter II
Citation 560XL Captain
Delta Private Jets

Member: Dan Morris
Flight Test Manager & Chief Pilot
Textron Aviation

3. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Division received the following CVR:

Recorder Manufacturer/Model: **L-3/Fairchild FA2100-1020**

Recorder Serial Number: **Unknown**

3.1 CVR Carriage Requirements

Per federal regulation, multiengine aircraft with more than six passenger seats and requiring two pilots manufactured prior to April 7, 2010, and operated under 14 CFR 135, must be equipped with a CVR that records a minimum of the last 30 minutes of aircraft operation; this is accomplished by recording over the oldest audio data. The accident aircraft was manufactured in 2003. When the CVR is deactivated or removed from the airplane, it retains only the most recent 2 hours of CVR operation.

3.2 Recorder Description

This model CVR, the L-3/Fairchild FA2100-1020, is a solid state CVR that records 120 minutes of digital audio. Specifically, it contains a 2-channel recording of the last 120 minutes of operation and separately contains 4-channel recording of the last 30 minutes of operation. The 120-minute portion of the recording is comprised of one channel that combines three audio panels sources and a second channel that contains the cockpit area microphone (CAM) source. The 30-minute portion of the recording contains 4 channels of audio information: one channel for each flight crew, one channel for a cockpit observer, and one channel for the CAM.

3.3 Recorder Damage

Upon arrival at the laboratory, it was evident that the exterior of the CVR had sustained some heat and structural damage. The outer case was removed and the interior crash-

protected case did not appear to have any heat or structural damage. The memory board within the crash-protected case was checked for heat or structural damage and none was found (see Figure 1 and Figure 2). The digital audio was successfully downloaded from the crash-survivable memory unit (CSMU). The damage to the ribbon cable of the CSMU was repaired in the lab by soldering a replacement connector to the end of the cable. The memory was then downloaded using instructions from the manufacturer.



Figure 1. Exterior damage to CVR crash case and chassis

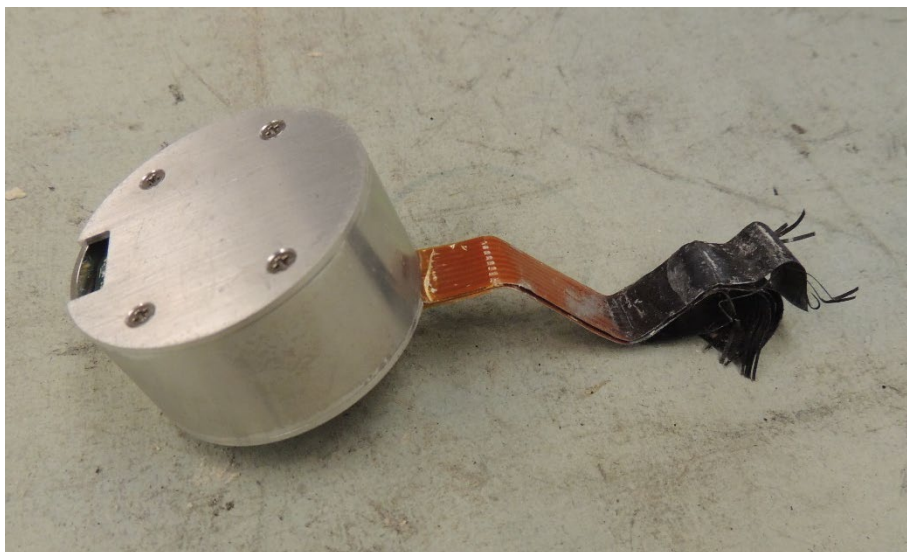


Figure 2. Undamaged state of CSMU once removed from the crash case

3.4 Audio Recording Description

Each channel's audio quality is indicated in Table 1.¹

Table 1: Audio Quality.			
Channel Number	Content/Source	Quality	Duration
1	Unknown	-	120 min
2	HOT-2	Excellent	120 min
3	HOT-1	Excellent	120 min
4	CAM	Good	120 min

3.5 Timing and Correlation

Timing on the partial transcript was established using external security camera footage of the aircraft. The security footage had a timestamp overlaid on the video. The timestamp from the video is known to be inaccurate, however, during the on-scene phase of the investigation, the difference between the security footage timestamp and local time was noted. During the "After Start" checklist, the crew stowed and verified the position of the speed brakes. This event was visible from the security camera footage and the time at which it occurred was noted. From that, an accurate time base was established for the transcript.

3.6 Description of Audio Events

The recording began at 11:01:44 and the transcript began at 11:14:16. The duration of the transcribed period is 18 minutes and 31.3 seconds. The recording ends at 11:32:48.

As part of the NTSB's accident investigation process, the flight crew was invited to review the CVR transcript and suggest corrections or additions. At the time of this report's publishing, they have not responded to the invitation.

¹ See attached CVR Quality Rating Scale.

Attachment I

CVR Quality Rating Scale

The levels of recording quality are characterized by the following traits of the cockpit voice recorder information:

Excellent Quality	Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous cockpit/radio transmissions that obscure each other.
Good Quality	Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system or to a large number of simultaneous cockpit/radio transmissions that obscure each other.
Fair Quality	The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by cockpit noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the CVR system that distorts or obscures the audio information.
Poor Quality	Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high cockpit noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the CVR system that severely distorts or obscures the audio information.
Unusable	Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the CVR system.

Transcript of a L-3/Fairchild FA2100-1020 solid state cockpit voice recorder installed on a Delta Private Jets Cessna 560XL (N91GY), which had a runway excursion at Oroville Municipal Airport in Oroville, CA.

LEGEND

HOT	Voices or sounds identified as coming through the pilot's headset
CAM	Voices or sounds identified as coming through the cockpit area microphone
RDO	Voices or sounds transmitted via radio
PHN	Voices or sounds identified as being related to a cell phone call
-1	Voice identified as the pilot flying
-2	Voice identified as the pilot monitoring
-?	Voice unidentified
*	Unintelligible word
#	Expletive
@	Non-pertinent word
()	Questionable insertion
[]	Editorial insertion

Note 1: Times are expressed in the local time: Pacific daylight time.

Note 2: Generally, only radio transmissions to and from the incident aircraft were transcribed.

Note 3: Words shown with excess vowels, letters, or drawn out syllables are a phonetic representation of the words as spoken.

Note 4: A non-pertinent word, where noted, refers to a word not directly related to the operation, control or condition of the aircraft.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:01:44.5			
START OF RECORDING START OF TRANSCRIPT			
		11:14:16.7 RDO- Weather	Oroville municipal airport - Oroville California automated weather observation one eight one four zulu - wind variable at zero three - visibility one zero - sky condition clear - temperature two seven Celsius - dew point one four Celsius - altimeter two niner niner four - remarks density altitude one thousand six hundred - Oroville municipal airport Oroville California automated weather observation one eight one four zulu - wind variable at zero three - visibility one zero - sky condition clear - temperature two seven Celsius - dew point one four Celsius - altimeter two niner niner four - remarks density altitude --
11:15:26.2 HOT-1	There the initial stuffs in perf/init - and flight planning's up.		
11:15:30.0 HOT-2	Ok.		
11:15:31.7 HOT-1	Departure destination we'll get the rest in the air then.		
11:15:34.3 HOT-2	So you didn't put the flight plan in?		
11:15:35.2 HOT-1	No we'll just take off unless you want to do it now.		
11:15:36.8 HOT-2	Yeah let's do it now.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:15:42.0 HOT-1	I heard it ding at me.		
11:15:43.5 HOT-2	Yeah.		
11:15:44.4 HOT-1	(Can't get the -) [Sound of laughter]		
11:15:47.0 HOT-2	What's that?		
11:15:47.6 HOT-1	Can't get the chock out.		
11:15:48.7 HOT-2	Couldn't get the chock out.		
11:15:50.1 HOT-1	[Sound of laughter] I climbed underneath and kicked it.		
11:15:52.6 HOT-2	I tried you're stronger than me.		
11:15:54.5 HOT-1	[Sound of laughter]		
11:15:57.9 HOT-2	Oh arrival runway ten right I-L-S scapo [SCAPO] off to timbers two [TMBRS2].		
11:16:12.8 HOT-2	Off gallo [GALLO].		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:16:15.0 HOT-2	Activate.		
11:16:16.3 HOT-2	Finish the perf/init.		
11:16:18.9 HOT-2	Flight plan.		
11:16:24.5 HOT-2	I believe you it's just a force of habit to go through it again, sorry.		
11:16:26.8 HOT-1	No, that's fine.		
11:16:29.8 HOT-2	Six.		
11:16:37.1 HOT-2	Ok.		
11:16:38.0 HOT-1	Before engine start checklist.		
11:16:41.8 HOT-2	Aw # I could've gotten that clearance you got the phone number - that you wrote down.		
11:16:45.6 HOT-1	Yeah it was on one of your sheets -		
11:16:46.8 HOT-2	#.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:16:47.5 HOT-2	Aw # - I probably threw it away.		
11:16:55.7 HOT-1	And I wrote it somewhere else right there.		
11:16:58.8 HOT-2	Aw I see it here - good man.		
11:17:02.8 HOT-2	Ah thank you.		
11:17:03.8 HOT-1	Nope.		
11:17:04.2 HOT-2	Parking brake.		
11:17:05.0 HOT-1	Set.		
11:17:05.6 HOT-2	Steering pin.		
11:17:06.3 HOT-1	Installed.		
11:17:07.0 HOT-2	Wheel chocks.		
11:17:07.5 HOT-1	Removed.		
11:17:08.1 HOT-2	Fuel panel door.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:17:08.8 HOT-1	Checked.		
11:17:09.0 HOT-2	Windows.		
11:17:09.8 HOT-1	Closed locked.		
11:17:10.3 HOT-2	Closed – locked.		
11:17:11.3 HOT-2	Fuel quantity.		
11:17:12.0 HOT-1	Verified.		
11:17:12.6 HOT-2	Crew briefing.		
11:17:13.4 HOT-1	Left seat takeoff right seat calls - if we have an emergency I don't wanna come back in here but here might be the only choice.		
11:17:17.9 HOT-2	And we don't have fire equipment.		
11:17:19.0 HOT-1	Yeah, there's not that much around so -		
11:17:21.4 HOT-2	That's true.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:17:23.3 HOT-2	Alright departure message and phones.		
11:17:25.0 HOT-1	Sent - off.		
11:17:25.7 HOT-2	Fans.		
11:17:26.6 HOT-1	Rotating freely.		
11:17:27.6 HOT-2	Avionics power.		
11:17:28.4 HOT-1	On.		
11:17:28.9 HOT-2	Exterior doors.		
11:17:29.7 HOT-1	Closed, lights out.		
11:17:30.5 HOT-2	Lav door - latched open - ground rec light		
11:17:32.7 HOT-1	On.		
11:17:33.0 HOT-2	Engines.		
11:17:33.9 HOT-1	Rotating freely.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:17:34.8 HOT-2	Ok clear.		
11:17:39.6 HOT-2	Who ya givin fingers to?		
11:17:41.3 HOT-1	I don't know.		
11:17:42.0 HOT-1/2	[Sound of laughter]		
11:17:42.7 HOT-1	Just (gotta) make it look right		
11:17:47.3 HOT-1	(Duck right).		
11:17:48.4 HOT-2	Ok, you see somebody I don't?		
11:17:50.7 HOT-1	I go through the motions no matter what.		
11:17:53.0 HOT-2	Force of habit I guess.		
11:17:53.6 HOT-1	Like debris you have to say everything to make it make sense.		
11:17:54.5 HOT-2	[Sound of laughter] Oooh god, help me.		
11:18:01.4 HOT-2	Uh - winds were variable favoring - uh - runway two.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:18:06.1 HOT-2	The variable was zero three zero.		
11:18:08.3 HOT-1	As long as that's the longer one yes.		
11:18:09.8 HOT-2	Uh it's longer.		
11:18:11.8 HOT-2	It's the one we came in on yesterday wasn't it?		
11:18:13.4 HOT-1	That's perfect. I thought we came in on twenty.		
11:18:15.4 HOT-2	Oh we could have, well the reciprocal's two.		
11:18:17.6 HOT-2	[Sound of laughter]		
11:18:20.8 HOT-1	Cause now we gotta taxi to the end and come back the other way.		
11:18:22.8 HOT-2	You come in whatever way you want.		
11:18:24.1 HOT-1	Yeah, yeah.		
11:18:26.0 HOT-1	Clean start on two, starting one.		
11:18:29.4 HOT-1	In case anybody's lookin.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:18:30.8 HOT-2	Yep.		
11:18:35.6 HOT-1	N one.		
11:18:39.2 HOT-1	Above twenty twenty right there's the phone number.		
11:18:43.5 HOT-1	Run through after starts when I start taxiin.		
11:18:45.6 HOT-2	Yep (I'm on it) sounds good.		
11:18:49.8 HOT-1	Sounds like it'll be a direct to the center, not to-		
11:18:52.2 HOT-2	It probably will, we'll find out.		
11:18:54.9 HOT-1	And I'm gonna try taxiing out through there so just keep me off that, uh -		
11:18:59.0 HOT-2	Seneca.		
11:19:00.2 HOT-1	Sure.		
11:19:01.7 HOT-2	Or you mean Kingair.		
11:19:02.9 HOT-1	It says Seneca two.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:19:03.8 HOT-2	Yeah oh.		
11:19:04.7 HOT-1	Guess it is a Seneca.		
11:19:06.9 HOT-1	Hit the nose of it - I don't - what's the difference between a Seminole and Seneca.		
11:19:10.3 HOT-2	I don't know.		
11:19:11.7 HOT-2	Seminole?		
11:19:12.2 HOT-1	Don't - Seminole - no Seneca. Don't tell me size.		
11:19:15.8 HOT-2	I have no idea.		
11:19:16.4 HOT-1	Oh.		
11:19:17.0 HOT-2	I think it's seating capacity isn't it?		
11:19:20.1 HOT-2	Seminole's a four place, Seneca's a six?		
11:19:22.8 HOT-1	No -		
11:19:24.6 HOT-1	Gen -		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:19:25.5 HOT-2	It's off.		
11:19:30.1 HOT-1	Gen check. Loads balanced.		
11:19:32.0 HOT-2	Alright, gen back on.		
11:19:41.5 HOT-1	After starts.		
11:19:43.8 HOT-2	Comin' to you.		
11:19:45.2 HOT-2	DC amps volts.		
11:19:46.3 HOT-1	On check.		
11:19:46.7 HOT-2	Avionics power.		
11:19:47.5 HOT-1	On.		
11:19:48.1 HOT-2	Flight director mode set your side.		
11:19:49.4 HOT-1	My side.		
11:19:49.8 HOT-2	FMS display - FMS displayed.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:19:51.8 HOT-1	Displayed.		
11:19:52.3 HOT-2	Takeoff N one is eighty nine four.		
11:19:54.8 HOT-1	See it.		
11:19:55.3 HOT-2	Transponder TCAS.		
11:19:56.6 HOT-1	On - displayed.		
11:19:57.7 HOT-2	Speedbrakes.		
11:19:59.0 HOT-1	Checked retracted.		
11:19:59.5 HOT-2	Flaps		
11:20:01.1 HOT-1	Flaps, seven seven set.		
11:20:02.2 HOT-2	Seven seven set - Flight controls?		
11:20:03.9 HOT-1	Free and correct.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:20:04.7 HOT-2	V speeds altitude alerter we've got initial one oh three - one oh four - one twenty one - I'll give you an altitude here as soon as we get the clearance.		
11:20:09.2 HOT-1	Roger.		
11:20:10.4 HOT-2	Passenger safety switch.		
11:20:11.4 HOT-1	On.		
11:20:11.7 HOT-2	Anti-ice.		
11:20:12.4 HOT-1	Off.		
11:20:13.0 HOT-2	Refreshment center switches - doesn't matter - Annunciator panel is checked and verified.		
11:20:19.1 HOT-2	Ok.		
11:20:23.3 HOT-1	Clear over there?		
11:20:24.4 HOT-2	Yep, clear on the right.		
		11:20:28.3 RDO-2	Oroville traffic, citation - uh - nine one golf yankee's - leaving the ramp taxiing runway two

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:20:34.1 HOT-1	Ah, so he landed gear up.		
11:20:35.8 HOT-1	You still clear?		
11:20:37.0 HOT-2	You are clear.		
11:20:38.6 HOT-2	Right wing is clear.		
11:20:42.5 HOT-2	Don't hit the Ercoupe.		
11:20:43.4 HOT-1	Clear.		
11:20:46.9 HOT-1	Just let me know.		
11:20:47.6 HOT-2	Yep - you're clear on this side - you're still good.		
11:20:50.8 HOT-2	Right wing is clear - clear - clear for turn.		
11:20:55.2 HOT-1	Roger.		
11:20:56.7 HOT-1	Headin' runway two?		
11:20:57.9 HOT-2	Yep - that's what I told 'em.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:20:59.5 HOT-1	According to that sign it makes it look like it's a left - that can't be right though.		
11:21:03.6 HOT-2	No.		
11:21:05.1 HOT-2	You're gonna cut straight across the runway.		
11:21:06.0 HOT-1	Straight across yeah.		
11:21:12.6 HOT-1	See what I mean?		
11:21:13.6 HOT-2	Yeah.		
11:21:13.8 HOT-1	Looks like three one - two to the left.		
11:21:14.5 HOT-2	I know I know - straight ahead - I know it's confusing.		
11:21:20.8 HOT-1	There's a wood pole out here - that's not exactly kosher.		
		11:21:29.6 RDO-2	Oroville traffic citation nine one golf yankee is crossing active three one one three Oroville - traffic advise.
11:21:35.6 HOT-1	Clear left.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:21:36.9 HOT-2	Clear right.		
		11:21:51.4 HOT-2	Oroville traffic - uh - nine one golf yankee has cleared active three one one three Oroville.
11:22:01.6 HOT-2	Six lights, emer stow - emer stow. [emergency stow]		
11:22:09.2 HOT-2	Two lights left.		
11:22:11.4 HOT-1	* (left) and on the right.		
11:22:12.3 HOT-2	Yep.		
11:22:13.7 HOT-2	Paddles down.		
11:22:14.9 HOT-1	Paddles down.		
11:22:16.2 HOT-2	Aaaand - come on baby - lights out.		
11:22:18.8 HOT-1	Roger.		
11:22:20.5 HOT-1	Here I'm - lookin out there.		
11:22:21.7 HOT-2	Yeah you could've taken that one too I'm sorry.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:22:22.8 HOT-1	Jog hard right and we'll back to the left.		
11:22:26.7 HOT-2	You should know better than to listen to me.		
11:22:29.8 HOT-2	Alright I'm * I'm down I'm call and make a phone number.		
11:22:34.1 HOT-1	Nine one six three six one eight - er six eight seven four.		
11:22:34.7 HOT-2	Yep.		
11:22:36.8 HOT-2	Yep.		
		11:23:23.6 PHN-2	Hi this is jet card nine one in Oroville *** outbound for PDX we're number one for runway two ***
		11:23:33.6 PHN-2	It's - uh - delta papa juliet nine one.
		11:25:01.5 PHN-2	Jet card - uh - nine two - ** PDX missed the first two fixes then as filed five thousand initial - thirty six in five - departure's one two seven decimal four - squawking seven four six two - hold for release jet card nine one.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		11:25:43.5 PHN-2	Alright you said jet card nine one is cleared PDX that's gonna be - uh - india lima alpha - lima mike tango - as filed five thousand initial - expect three six zero in five minutes - departure is one two seven decimal four - squawking seven four six two - hold for release jet card nine one.
11:25:47.2 CAM	[Sound of engine RPM increasing and decreasing]		
		11:26:05.2 PHN-2	Yep we'll stand by online for you.
11:27:10.1 CAM	[Sound of phone ringing]		
		11:28:00.9 PHN-2	Go for jet card nine one.
		11:28:13.9 PHN-2	Yeah so - uh - the initial Klamath Falls then as filed
		11:28:22.8 PHN-2	Ok *** Klamath falls *** india lima alpha.
		11:28:29.6 PHN-2	Lima mike tango thank you sir.
		11:28:37.4 PHN-2	One three two point two.
		11:28:45.6 PHN-2	Ok will advise if not off in five minutes jet card nine one - thank you – bye.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:29:10.3 HOT-2	Thank you sir.		
11:29:11.4 HOT-1	Yup.		
11:29:12.9 HOT-2	#.		
11:29:13.2 HOT-1	Alright, so we're going now direct to lima mike tango.		
11:29:15.9 HOT-2	Yep, as filed.		
11:29:17.6 HOT-1	What was the one three two point two?		
11:29:18.9 HOT-2	That's the new departure frequency.		
11:29:20.0 HOT-1	It's in there - We're still on CTAF.		
11:29:22.1 HOT-2	Alright.		
11:29:24.1 HOT-2	Alright, before rollout here we go - taxi checks were complete?		
11:29:27.9 HOT-1	Yup.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:29:29.6 HOT-2	Before takeoff - cabin announcement - you made it - runway identification - I see it - ignit - ignition switches		
11:29:35.7 HOT-2	Ignition switches?		
11:29:37.0 HOT-1	Except the yoke is stuck.		
11:29:38.7 HOT-2	That's not good.		
11:29:43.5 HOT-2	Autopilot trim disconnect.		
11:29:45.3 CAM	[Sound of autopilot disconnect]		
11:29:45.4 HOT-2	There you go, his autopilot was on.		
11:29:47.8 HOT-1	Huh.		
11:29:48.8 HOT-1	Oh your i -		
11:29:48.9 HOT-2	You still have no takeoff.		
11:29:50.0 HOT-1	Your iPad hit it.		
11:29:51.0 HOT-2	You still have no takeoff.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:29:52.4 HOT-2	Yeah trim wheel.		
11:29:53.8 HOT-1	Your iPad hit the -		
11:29:54.6 HOT-2	Yep.		
11:29:55.1 HOT-1	[Sound of laughter] I'm like - why's it - why's it tryin to turn?		
11:29:56.7 HOT-2	[Sound of laughter] It's all good.		
11:30:01.2 HOT-1	Alright - go ahead.		
11:30:01.9 HOT-2	You're good.		
11:30:02.5 HOT-1	I can't taxi over here.		
11:30:04.3 HOT-2	[Sound of laughter] Oh jee - what the #.		
11:30:08.0 HOT-2	[Sound of laughter]		
11:30:12.0 HOT-2	Alright brother you're good.		
11:30:15.7 HOT-1	What's that?		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:30:16.6 HOT-2	Turn - turn knob - I don't know - probably who the # knows.		
11:30:20.5 HOT-2	I don't know what that is.		
11:30:26.3 HOT-2	Turn knob's workin.		
11:30:27.4 HOT-1	Turn knob - it's probably saying it's stuck - what about this?		
11:30:32.4 HOT-2	No?		
11:30:33.8 HOT-2	# kidding me.		
11:30:37.3 HOT-2	[Sound of sigh] You're on the runway, that's great.		
11:30:41.0 HOT-2	I don't know what that one is - it's your choice - go or no go.		
11:30:43.4 HOT-1	We'll go we just won't turn it on until we figure it out.		
11:30:45.6 HOT-2	Got it.		
11:30:46.9 HOT-1	Ready?		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:30:47.3 HOT-2	Yep		
		11:30:48.0 RDO-2	Oroville traffic citation nine one golf yankee is - uh - active runway two departure jet card.
11:30:50.8 CAM	[Sound of engine RPM increasing]		
		11:30:53.8 RDO-2	Oroville.
11:30:56.5 HOT-1	Set takeoff thrust.		
11:30:58.2 HOT-2	Takeoff set.		
11:31:00.9 HOT-2	# she's barely movin' dude.		
11:31:05.4 HOT-2	Somethin ain't right dude.		
11:31:08.2 HOT-1	She's rollin' - call speeds.		
11:31:09.3 HOT-2	Alright. [sound similar to nervous chuckle]		
11:31:16.9 HOT-2	Dude.		
11:31:17.8 HOT-2	Eighty cross check panel clear.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:31:19.4 HOT-1	Roger.		
11:31:24.1 HOT-2	#		
11:31:25.4 HOT-1	She's takin some runway.		
11:31:27.2 HOT-2	V one.		
11:31:27.8 HOT-1	Roger.		
11:31:28.4 HOT-2	Rotate.		
11:31:29.5 HOT-1	Rotate.		
11:31:33.2 HOT-2	God #.		
11:31:34.7 CAM	[Sound of four aural chimes]		
11:31:37.4 HOT-2	#		
11:31:38.1 HOT-1	Well.		
11:31:38.5 CAM	[Sound of decrease in engine RPM]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
11:31:41.7 HOT-2	#		
11:31:45.7 CAM	[Sound similar to thrust reverser]		
11:31:54.9 HOT-2	Cut it off.		
11:31:56.5 HOT-2	Abort.		
11:31:57.3 HOT-1	It's off.		
11:32:00.6 HOT-1	Evacuate.		
11:32:01.4 HOT-2	Yep.		
11:32:19.6 CAM	[Sound similar to door opening]		
11:32:42.1 HOT-2	Right engine fire.		
11:32:44.3 HOT-2	Engine's still running.		
11:32:45.8 HOT-1	Yeah that's why I'm shuttin them off.		
11:32:48.0			
END OF TRANSCRIPT END OF RECORDING			