



## CVR transcript Eastern Air Lines Flight 401 - 29 DEC 1972

CVR transcript of the December 29, 1972 accident of Eastern Flight 401, a Lockheed L-1011 TriStar in the E near Miami, FL, USA.

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Furthermore, this transcript is made available for educational purposes, so the reader is encouraged to read [accident description](#) associated with the transcripts for better understanding of the circumstances.

### Legenda

- RDO - Radio transmission from accident aircraft
- CAM - Cockpit Area Microphone sound or source
  - 1 - Voice identified as Captain
  - 2 - Voice identified as First Officer
  - 3 - Voice identified as Second Officer
- TWR - Miami Controller (tower)

time	source	content
23.32:35	RDO-1	Miami Tower, Eastern 401 just turned on final
23.32:45	TWR	Who else called?
23.32:48	CAM-1	Go ahead and throw 'em out
23.32:52	RDO-1	Miami Tower, do you read, Eastern 401? Just turned on final
23.32:56	TWR	Eastern 401 Heavy, continue approach to 9 left
23.33:00	RDO-1	Coninue approach, roger
23.33:00	CAM-3	Continuous ignftion. No smoke
	CAM-1	Coming on
	CAM-3	Brake system
	CAM-1	Okay
	CAM-3	Radar
	CAM-1	Up, off
	CAM-3	Hydraulic panels checked
	CAM-2	Thirty-five, thirty three
	CAM-1	Bert, is that handle in?
	CAM-?	***
	CAM-3	Engine crossbleeds are open
23.33:22	CAM-?	Gear down

CAM-? \*\*\*

CAM-1 I gotta

CAM-? .....

23.33:25 CAM-1 I gotta raise it back up

23.33:47 CAM-1 Now I'm gonna try it down one more time

CAM-2 All right

23.33:58 CAM [sound of altitude alert horn]

CAM-2 (Right) gear.

CAM-2 Well, want to tell 'em we'll take it around and circle around and # around?

23.34:05 RDO-1 Well ah, tower, this is Eastern, ah, 401. It looks like we're gonna have to circle, we don't have a light on yet

23.34:14 TWR Eastern 401 heavy, roger, pull up, climb straight ahead to two thousand, go back to approach control, or eight six

23.34:19 CAM-2 Twenty-two degrees.

CAM-2 Twenty-two degrees, gear up

CAM-1 Put power on it first, Bert. Thata boy.

CAM-1 Leave the # # gear down till we fid out what we got

CAM-2 Allright

CAM-3 You want me to test the lights or not?

CAM-1 Yeah.

CAM-? \* \* seat back

CAM-1 Check it

CAM-2 Uh, Bob, it might be the light. Could you jiggle tha, the light?

CAM-3 It's gotta, gotta come out a little bit and then snap in

CAM-? \* \*

CAM-? I'll put 'em on

23.34:21 RDO-1 Okay, going up to two thousand, one twenty-eight six

23.34:58 CAM-2 We're up to two thousand

CAM-2 You want me to fly it, Bob?

CAM-1 What frequency did he want us on, Bert?

CAM-2 One twenty-eight six

CAM-1 I'll talk to 'em

CAM-3 It's right .....

CAM-1 Yeah, .....

CAM-3 I can't make it pull out, either

CAM-1 We got pressure

CAM-3 Yes sir, all systems

CAM-1 # #

23.35:09 RDO-1 All right ahh, Approach Control, Eastern 401, we're right over the airport here and climbing to two thousand, fact, we've just

23.35:20 APP Eastern 401, roger. Turn left heading three six zero and maintain two thousand, vectors to 9 Left final

23.35:28 RDO-1 Left three six zero

23.36:04 CAM-1 Put the ... on autopilot here

CAM-2 Allright

CAM-1 See if you can get that light out

CAM-2 Allright

CAM-1 Now push the switches just a ... forward.

CAM-1 Okay.

CAM-1 You got it sideways, then.

CAM-? Naw, I don't think it'll fit.

CAM-1 You gotta turn it one quarter turn to the left.

23.36:27 APP Eastern 401, turn left heading three zero zero

RDO-1 Okay.

23.36:37 RDO-1 Three zero zero, Eastern 401

23.37:08 CAM-1 Hey, hey, get down there and see if that damn nose wheel's down. You better do that.

CAM-2 You got a handkerchief or something so I can get a little better grip on this? Anything I can do with it?

CAM-1 Get down there and see if that, see if that # thing ...

CAM-2 This won't come out, Bob. If I had a pair of pliers, I could cushion it with that Kleenex

CAM-3 I can give you pliers but if you force it, you'll break it, just believe me

CAM-2 Yeah, I'll cushion it with Kleenex

CAM-3 Oh, we can give you pliers

23.37:48 APP Eastern, uh, 401 turn left heading two seven zero

23.37:53 RDO-1 Left two seven zero, roger

23.38:34 CAM-1 To # with it, to # with this. Go down ans see if it's lined up with the red line. That's all we care. # around twenty-cent pic

CAM \*\*\*

23.38:46 RDO-1 Eastern 401 'll go ah, out west just a little further if we can here and, ah, see if we can get this light to

23.38:54 APP Allright, ah, we got you headed westbound there now, Eastern 401

23.38:56 RDO-1 Allright

CAM-1 How much fuel we got left on this # # # #

CAM-? Fifty two five

CAM-2 (It won't come out) no way

23.39:37 CAM-1 Did you ever take it out of there?

CAM-2 Huh?

CAM-1 Have you evre taken it out of there?

CAM-2 Hadn't till now

CAM-1 Put it in the wrong way, huh?

CAM-2 In there looks \* square to me

CAM-? Can't you get the hole lined up?

CAM-? \*\*\*

CAM-? Whatever's wrong?

CAM-1 (What's that?)

23.40:05 CAM-2 I think that's over the training field

CAM-? West heading you wanna go left or \*

CAM-2 Naw that's right, we're about to cross Krome Avenue right now

23.40:17 CAM [Sound of click]

CAM-2 I don't know what the # holding that ### # in

CAM-2 Always something, we coulda make schedule

23.40:38 CAM [Sound of altitude alert]

CAM-1 We can tell if that ### # is down by looking down at our indices

CAM-1 I'm sure it's down, there's no way it couldnt help but be

CAM-2 I'm sure it is

CAM-1 It freefalls down

CAM-2 The tests didn't show that the lights worked anyway

CAM-1 That 's right

CAM-2 It's a faulty light

23.41:05 CAM-2 Bob, this ### # just won't come out

CAM-1 Allright leave it there

CAM-3 I don't see it down there

CAM-1 Huh?

CAM-3 I don't see it

CAM-1 You can't see that indis ... for the nosewheel ah, there's a place in there you can look and see if they're l

CAM-3 I know, a little like a telescope

CAM-1 Yeah

CAM-3 Well...

CAM-1 It's not lined up?

CAM-3 I can't see it, it's pitch dark and I throw the little light I get ah nothing

23.41:31 CAM-4 Wheel-well lights on?

CAM-3 Pardon?

CAM-4 Wheel-well lights on?

CAM-3 Yeah wheel well lights always on if the gear's down

CAM-1 Now try it

23.41:40 APP Eastern, ah 401 how are things comin' along out there?

23.41:44 RDO-1 Okay, we'd like to turn around and come, come back in

CAM-1 Clear on left?

CAM-2 Okay

23.41:47 APP Eastern 401 turn left heading one eight zero

23.41:50 CAM-1 Huh?

23.41:51 RDO-1 One eighty

23.42:05 CAM-2 We did something to the altitude

CAM-1 What?

23.42:07 CAM-2 We're still at two thousand right?

23.42:09 CAM-1 Hey, what's happening here?

CAM [Sound of click]

23.42:10 CAM [Sound of six beeps similar to radio altimeter increasing in rate]

23.42:12 [Sound of impact]

## I. INVESTIGATION

### 1. 1 History of the Flight

Eastern Air Lines, Inc., Lockheed L- 1011, N31 OEA, operating as Flight 401 (EAL 401), was a scheduled passenger flight from the John F. Kennedy International Airport (JFK), Jamaica, New York, to the Miami International Airport (MIA ), Miami, Florida.

On December 29, 1972, the flight departed from JFK at 2120 <sup>1/</sup> with 143 passengers and 13 crewmembers on board and was cleared to MIA in accordance with an instrument flight rules flight plan.

The flight was uneventful until the approach to MIA. The landing gear handle was placed in the "down" position during the preparation for landing, and the green light, which would have indicated to the flight-crew that the nose landing gear was fully extended and locked, failed to illuminate. The captain recycled the landing gear, but the green light still failed to illuminate.

At 2334:05, EAL 401 called the MIA tower and stated, "Ah, tower this is Eastern, ah, four zero one, it looks like we're gonna have to circle; we don't have a light on our nose gear yet. "

At 2334:14, the tower advised, "Eastern four oh one heavy, roger, pull up, climb straight ahead to two thousand, go back to approach control, one twenty eight six. "

At 2334:21, the flight acknowledged, "Okay, going up to two thousand, one twenty eight six. "

At 2335:09, EAL 401 contacted MIA approach control and reported, "All right, ah, approach control, Eastern four zero one, we're right over the airport here and climbing to two thousand feet, in fact, we've just reached two thousand feet and we've got to get a green light on our nose gear. "

At 2335:20, approach control acknowledged the flight's transmission and instructed EAL 401 to maintain 2, 000 feet mean sea level and turn to a heading of 360° magnetic. The new heading was acknowledged by EAL 401 at 2335:28.

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1/ All times herein are eastern standard, based on the 24-hour clock.

At 2336:04, the captain instructed the first officer, who was flying the aircraft, to engage the autopilot. The first officer acknowledged the instruction.

At 2336:27, MIA approach control requested, "Eastern four oh one, turn left heading three zero zero." EAL 401 acknowledged the request and complied.

The first officer successfully removed the nose gear light lens assembly, but it jammed when he attempted to replace it.

At 2337:08, the captain instructed the ~~second officer~~ to enter the forward electronics bay, below the flight deck, to check visually the alignment of the nose gear indices. <sup>2/</sup>

At 2337:24, a downward vertical acceleration transient of 0.04 g caused the aircraft to descend 100 feet; the loss in altitude was arrested by a pitchup input.

At 2337:48, approach control requested the flight to turn left to a heading of 270° magnetic. EAL 401 acknowledged the request and turned to the new heading.

Meanwhile, the flightcrew continued their attempts to free the nose gear position light lens from its retainer, without success. At 2338:34, the captain again directed the second officer to descend into the forward electronics bay and check the alignment of the nose gear indices.

At 2338:46, EAL 401 called MIA approach control and said, "Eastern four oh one'll go ah, out west just a little further if we can here and, ah, see if we can get this light to come on here." MIA approach control granted the request.

From 2338:56 until 2341:05, the captain and the first officer discussed the faulty nose gear position light lens assembly and how it might have been reinserted incorrectly.

At 2340:38, a half-second C-chord, which indicated a deviation of +250 feet from the selected altitude, sounded in the cockpit. No crew member commented on the C-chord. No pitch change to correct for the loss of altitude was recorded.

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2/ Proper nose gear extension is indicated by the physical alignment of two rods on the landing gear linkage. With the nose wheelwell light illuminated, these rods may be viewed by means of an optical sight which is located in the forward electronics bay, just forward of the nose wheelwell.

Shortly after 2341, the second officer raised his head into the cockpit and stated, "I can't see it, it's pitch dark and I throw the little light, I get, ah, nothing. "

The flightcrew and an Eastern Air Lines maintenance specialist who was occupying the forward observer seat then discussed the operation of the nose wheelwell light. Afterward, the specialist went into the electronics bay to assist the second officer.

At 2341:40, MIA approach control asked, "Eastern, ah, four oh one how are things comin' along out there? "

This query was made a few seconds after the MIA controller noted an altitude reading of 900 feet in the EAL 401 alphanumeric data block on his radar display. The controller testified that he contacted EAL 401 because the flight was nearing the airspace boundary within his jurisdiction. He further stated that he had no doubt at that moment about the safety of the aircraft. Momentary deviations in altitude information on the radar display, he said, are not uncommon; and more than one scan on the display would be required to verify a deviation requiring controller action.

At 2341:44, EAL 401 replied to the controller's query with, "Okay, we'd like to turn' around and come, come back in, " and at 2341:47, approach control granted the request with; "Eastern four oh one turn left heading one eight zero. " EAL 401 acknowledged and started the turn.

At 2342:05, the first officer said, "We did something to the altitude. " The captain's reply was, "What? "

At 2342:07, the first officer asked, "We're still at two thousand, right? " and the captain immediately exclaimed, "Hey, what's happening here? "

At 2342:10, the first of six radio altimeter warning "beep" sounds began; they ceased immediately before the sound of the initial ground impact.

At 2342:12, while the aircraft was in a left bank of 28°, it crashed into the Everglades at a point 18.7 statute miles west-northwest of MIA (latitude 25°52' N., longitude 80°36' W.). The aircraft was destroyed by the impact.

Local weather at the time of the accident was clear, with unrestricted visibility. The accident occurred in darkness, and there was no Moon.