Flight Path

Crash During Approach to Landing
Empire Airlines doing business as FedEx
ATR-72-320
Lubbock, Texas
January 27, 2009
CEN09MA142

This animation is a shelf item and may be obtained by contacting:

National Transportation Safety Board
Records Management Division (CIO-40)
490 L'Enfant Plaza, SW
Washington, DC 20594
(202) 314-6551
800-877-6799
Online request: http://www.ntsb.gov/pubmail/pubmail.asp

This animation is also available on the NTSB website.

This three-dimensional (3-D) animated reconstruction shows the January 27, 2009, accident involving an ATR-42-320 N902FX, operated by Empire Airlines, which crashed short of Runway 17R, Lubbock Preston Smith International Airport, Lubbock, Texas, while executing an instrument landing system approach.

The animation shows excerpts from the flight data recorder (FDR), the cockpit voice recorder (CVR) transcript, recorded radar data, and aircraft performance data. It does not depict the weather or visibility conditions at the time of the accident. The animation does not include audio.

The animation time is central standard time. The FDR data stops when the airplane first strikes the ground. The animation fades into a photograph of the ground scars and then to a photograph of the accident airplane as the CVR transcript continues until the last comment at 04:36:52.

The upper portion of the animation shows a 3-D model of the airplane and the airplane's motions during the accident sequence. In this area, selected content from the CVR transcript or other annotations are superimposed as text at the time that the event occurred. All times (in central standard time) are shown on the right side of the screen.

The lower portion of the animation depicts instruments and indicators, which display selected FDR or calculated parameters. The instruments and indications are shown in three sections, which are (from left to right):

- Airspeed and altitude; attitude indicator showing pitch and roll attitude

- Shaker and Pusher indicated as text; control wheel/column icon depicting the inputs to control wheel (rotating right or left) and control column (moving up or down); and rudder pedal inputs as an indicator.

- The power and flap handle selection as indicators; auto pilot state is indicated as text.

CVR Transcript:

1. 04:34:01 RDO-1: Empire eighty two eighty four is uh checkin' in nine out on the localizer inbound.

2. 04:34:06 TWR: Empire eighty two eighty four Lubbock Tower runway one seven right clear to land. winds zero one zero at eight.

3. 04:34:11 RDO-1: roger clear to land.

4. 04:34:14 HOT-2: alright...go.

5. 04:34:24 HOT-2: flaps fifteen gear down landing check.

6. 04:34:29 CAM: [sound similar to landing gear deployment]

7. 04:34:33 HOT-1: alright awww landing check. start selector is continuous relight. power management is in takeoff. icing AOA is on landing gear confirmed three green.

8. 04:34:43 HOT-2: glideslope star.

9. 04:34:48 HOT-2: confirmed.

10. 04:34:48 HOT-1: uh let's see we should have glideslope star.

11. 04:34:52 HOT-1: very good...and flaps condition levers to go.

12. 04:34:58 HOT: [sound similar to altitude alert]

13. 04:35:03 HOT-2: what the heck is going on?

14. 04:35:04 HOT-1: you know what? we have no flaps.

15. 04:35:08 HOT-2: aw #.

16. 04:35:10 LB: [sound similar to outer marker]

17. 04:35:22 TAWS: one thousand.

18. 04:35:23 HOT-2: okay.

19. 04:35:28 HOT-1: what the hell?

20. 04:35:30 HOT: [sound similar to stall warning and stickshaker lasting 1.1 seconds]

21. 04:35:31 HOT-2: aw #.

22. 04:35:31 HOT-1: yeah don't do that.

23. 04:35:32 CAM: [sound similar to stall warning lasting 0.3 seconds]

24. 04:35:34 HOT-2: alright.

25. 04:35:36 HOT-1: just keep flying the airplane. okay.

26. 04:35:40 HOT-2: should I go around?

27. 04:35:41 HOT-1: no.

28. 04:35:41 TWR: winds zero one zero at eight.

29. 04:35:43 HOT-1: keep descending.

30. 04:35:44 HOT-2: we're getting pretty close here. [straining]

31. 04:35:45 HOT-1: what's that? you want me to finish it?

32. 04:35:47 HOT-2: yes please.

33. 04:35:48 HOT-1: okay my airplane.

34. 04:35:49 HOT-2: your controls.

35. 04:35:50 HOT-?: [sound of heavy breathing]

36. 04:35:52 HOT-2: alright you got power.

37. 04:35:53 HOT: [sound similar to altitude alert]

38. 04:35:58 TAWS: five hundred.

39. 04:36:00 HOT-1: aw #.

40. 04:36:00 HOT: [sound similar to stall warning and stickshaker lasting 0.9
                      seconds]

41. 04:36:00 TAWS: pull up. pull up.

42. 04:36:02 HOT-1: okay.

43. 04:36:04 HOT-2: there's the runway.

44. 04:36:17 HOT-1: max RPM.

45. 04:36:17 HOT-2: max RPM.

46. 04:36:19 CAM: [sound similar to RPM increase]

47. 04:36:19 HOT: [sound similar to stall warning and stickshaker lasting 0.5 seconds]

48. 04:36:20 HOT: [sound similar to stall warning and stickshaker lasting 5.4 seconds]

49. 04:36:22 HOT-2: oh #.

50. 04:36:25 HOT-1: #.

51. 04:36:25 HOT-2: #. [straining]

52. 04:36:27 CAM: [sound of impact]

53. 04:36:28 CAM: [sound of grinding and scraping]

54. 04:36:32 CAM: [sound of continuous repetitive chime continues until end of recording]

55. 04:36:43 CAM: [sound similar to occupants moving around in cockpit]

56. 04:36:45 HOT-1: get out of the airplane. get out of the airplane.

57. 04:36:48 CAM: [sound of scraping stops]

58. 04:36:52 CAM-1: go out the— go out the hatch.