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|---|---|---|
| ACCESSION NO. | : | 314668 |
| DATE OF OCCURRENCE | : | 9508 |
| REPORTED BY | : | FLC |
| PERSONS FUNCTIONS | : | FLC,PIC.CAPT; |
| FLIGHT CONDITIONS | : | VMC |
| REFERENCE FACILITY ID | : | CLE |
| FACILITY STATE | : | OH |
| FACILITY TYPE | : | ARPT |
| FACILITY IDENTIFIER | : | CLE |
| AIRCRAFT TYPE | : | B737-300 |
| ANOMALY DESCRIPTIONS | : | LOSS OF ACFT CTL |
| ANOMALY DETECTOR | : | COCKPIT/FLC |
| ANOMALY RESOLUTION | : | FLC REGAINED ACFT CONTROL |
| ANOMALY CONSEQUENCES | : | NONE |

NARRATIVE : WHILE DSNDING TO 8000 FT PASSING THROUGH 8500 FT, ACFT SHARPLY ROLLED L APPROX 30 DEG, THEN TO THE R. ENGS AT IDLE. POSSIBLE UNSCHEDULED CTL SURFACE MOVEMENT. TURNED OFF YAW DAMPER AND AUTOPLT AFTER LEVELING WINGS AND RAN CHKLIST. TURNED YAW DAMPER BACK ON PER QRH. HAND FLEW ACFT TO LNDG IN CLE. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING: THIS CAPT WAS FLYING A B737-300 WHEN HE EXPERIENCED UNCOMMANDED ROLL INPUT TO THE L AND THE R. HE ATTEMPTED TO CORRECT BY USING BOTH AILERON AND RUDDER, BUT THE AILERONS FELT THAT THEY WERE NOT CONNECTED AS THERE WAS NO FEELING OF FEEDBACK. ALSO, THE AUTOPLT DID NOT DISCONNECT DURING THE MANUAL AILERON INPUTS, NOR DID IT DEFAULT TO CTL WHEEL STEERING. AFTER HE DISCONNECTED THE AUTOPLT, HE REGAINED FULL CTL OF THE ACFT. DURING HIS ANALYSIS AND RECOVERY, THE CAPT ALSO SHUT OFF THE YAW DAMPER, BUT HE RESTORED THAT AFTER HE FELT SECURELY IN CTL. AFTER THE EVENT THE CAPT WAS EXTENSIVELY INTERVIEWED BY THE COMPANY, THE FAA, AND THE MANUFACTURER'S REPRESENTATIVES. HE WAS TOLD THAT THERE WERE NUMEROUS PROBS WITH THE ACFT, INCLUDING A STANDBY RUDDER HYD ACTUATOR SHUTOFF VALVE THAT WAS FROZEN SHUT, THE L LEADING EDGE DEVICES THAT EXTENDED FURTHER THAN THE R SIDE, AND A PROTRUDING BOLT ON THE L OUTBOARD SLAT WOULD HOLD UP ITS EXTENSION UNTIL THE OTHER DEVICES WERE EXTENDED, THEN THIS DEVICE WOULD EXTEND WITH A LOUD REPORT. ADDITIONALLY, A LEAK OF SOME DURATION FROM THE FORWARD LAVATORY HAD CORRODED AND OTHERWISE DAMAGED THE EQUIP IN THE FORWARD ELECTRONICS COMPARTMENT BAY. THE VARIOUS PARTIES TO THE INCIDENT'S INVESTIGATION HAVE AGREED TO THE FACTS AS STATED BY THE FLC, EXCEPT THAT THE DEG OF BANK, ACCORDING TO THE DFDR, ONLY INDICATED ABOUT 13 DEG OF BANK, YET BOTH PLTS DECLARED THAT THE BANK WAS AT LEAST 30 DEG IN EACH DIRECTION.

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## 9. AIRPLANE AUG 95

### A. PILOT LOG BOOK REPORT

- Inbound to Cleveland, 9,000 to 8,000 feet, flaps 5, 185 knots. Airplane rolled left to approximately 30 degrees very quickly. Countered with right aileron – may have hit stops – Airplane responded sluggishly, but did respond and went to wings level, at which time it snapped right. had to go wheel left to recover to wings level. At end of event, noticed full left yaw damper indication. Switched yaw damper and FCC off. Normal landing. Hydraulics steady and in green normal operating range. "A" FCC engaged. (No control wheel deflection during the initial roll.)

### B. POST FLIGHT CREW COMMENTS

In Heading Select, all lined up. Wings level when all of a sudden a sharp left roll. Turned yoke full right. Airplane responded slowly to wings level and then snapped right. Airplane rolled right with control wheel at level position. Saw yaw damper at full left indication. Did manually input a little left rudder input. No pedal movement.

During the event, autopilot reverted to CWS. Didn't turn off A/P until wings were level. F/O heard a pop or bang before event happened. Like a loud snapping or thud, muffled bang. Captain did not hear anything. Threw flight attendant to the floor and scared the flight crew. Everything okay after A/P and yaw damper turned off. 51 ←

Total time for event about 4 seconds. Rolled quickly. Didn't think that the rudder could cause the type of rapid roll they observed. Not sure about surfaces. At flaps 5, gear up. Speed brakes may have been up, but not sure. Trim normal (Captain did not like to use trim). Was in rig pretty good. No traffic in the area. Clear weather. Not lined up on final – not on localizer. Heading 320 degrees – would not turn left per ATC request after event to make sure everything okay. Engines at idle –normal indications.

Reported bank of 30 degrees but believed it went further. More like a barrel roll. Nose dropped 7 degrees. Heading change was unknown, however, airplane was back on original heading after the event was completed. A/T on.

### C. MISCELLANEOUS INFORMATION FROM VARIOUS SOURCES

- Verbal report from to Boeing Field Service Representative, provided in telex August 1995.
  - The flight crew reported experiencing a 30 degree roll to the right and then back to the left, at approximately 8 to 9,000 feet, 185 knots, during descent into approximately 1400 hours.

    The flight crew used control wheel steering to override the autopilot, which was on, turned off the yaw damper, and reported that the rudder indicator was all the way to the left.

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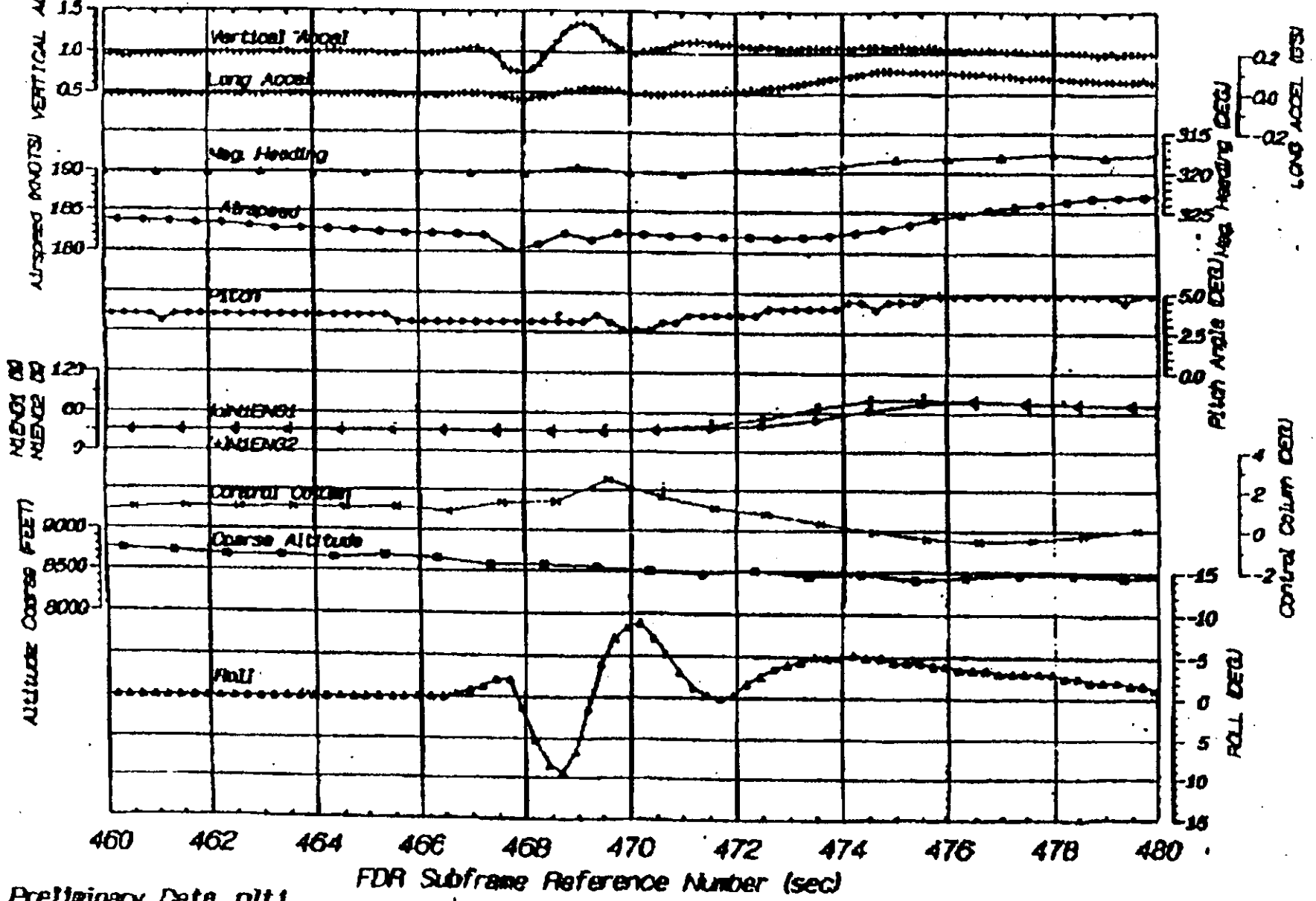
PRELIMINARY INFORMATION

# B737-300 Uncommanded Roll

8/ /95




Preliminary Data, plt1

NTSB