

DATE: Jul-95 07:39am

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WAS ON A STEADY HEADING OF 330 DEGREES JUST PRIOR TO THE EVENT. THE ANALYSIS INDICATES THAT THE FLAPS WERE UP AT THIS TIME AND PROBABLE WERE NOT EXTENDED TO FLAPS 1 UNTIL AFTER AN ELAPSED TIME OF 195 SECONDS. AT TIME 167 THE BANK ANGLE AND HEADING STARTED DRIFTING SLOWLY TO THE RIGHT. THE AUTOPILOT REACTED WITH A LEFT WHEEL COMMAND WHICH CAUSED A GENTLE ROLL TO THE LEFT. AT A TIME OF 177, HOWEVER, THE BANK ANGLE AND HEADING AGAIN MOVED TO THE RIGHT. THE AUTOPILOT CONTINUED TO PUT IN WHEEL TO THE LEFT TO TRY TO CAPTURE THE DESIRED HEADING. THE AIRCRAFT RESPONDED TO THE AUTOPILOT COMMAND BY ROLLING TO THE LEFT. AT TIME 189 THE AIRCRAFT ROLL RATE INCREASED RATHER SHARPLY TO 7 DEGREES/SECOND. THIS PROBABLY DREW THE ATTENTION OF THE CREW TO THE INCREASING BANK ANGLE. THE CREW INITIALLY RESPONDED TO THE INCREASED LEFT ROLL RATE WITH A RIGHT RUDDER INPUT STARTING AT TIME 189.5. THE RIGHT RUDDER INPUT ALSO CAUSED A REDUCTION IN THE HEADING RATE PRIOR TO THE AIRCRAFT REACHING THE SELECTED HEADING. THIS RESULTED IN THE AUTOPILOT CONTINUING TO PUT IN WHEEL TO THE LEFT. AT TIME 193, THE RUDDER REACHED A MAXIMUM VALUE OF 6 DEGREES AND AT TIME 194.5 THE CONTROL WHEEL MOVED TO THE RIGHT RATHER RAPIDLY WHICH CONTRIBUTED TO THE RETURN TO WINGS LEVEL AND THE APPARENT OVERSHOOT. DURING THIS TIME THE RUDDER WAS RETURNED TO NEUTRAL CAUSING THE HEADING RATE TO INCREASE TO THE LEFT. DURING THE NEXT HEADING CHANGE ONLY THE WHEEL WAS USED TO MANEUVER THE AIRCRAFT.

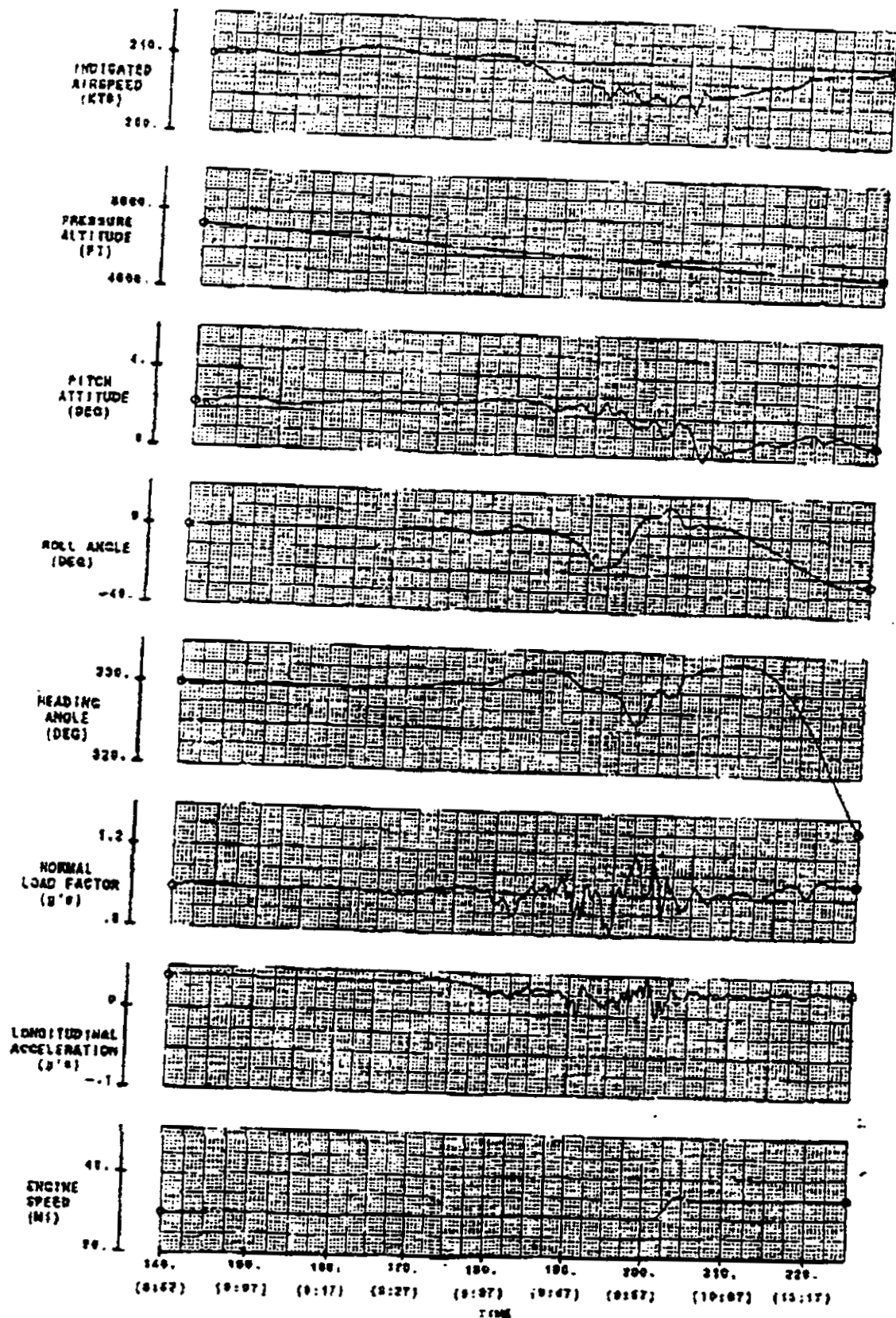
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CONCLUSIONS

IT IS NOT KNOWN WHEN THE FAULTY GROUNDING OF THE AUTOPILOT ACTUATOR LVDC PIN FIRST OCCURRED. BASED ON OUR ANALYSIS THIS FAR OF THE FDR AND OTHER DATA, WE BELIEVE THAT IT COULD HAVE CONTRIBUTED TO THE ROLL EXCURSION EXPERIENCED ON 3. HOWEVER, WE WILL CONTINUE TO ANALYZE AND CORRELATE THE FDR DATA AND AUTOPILOT ACTUATOR EXAMINATION RESULTS. WE WILL PROVIDE AN UPDATE TO BY JUL-95.

BOEINGAIR M-7272 2H-80

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FIGURE 1

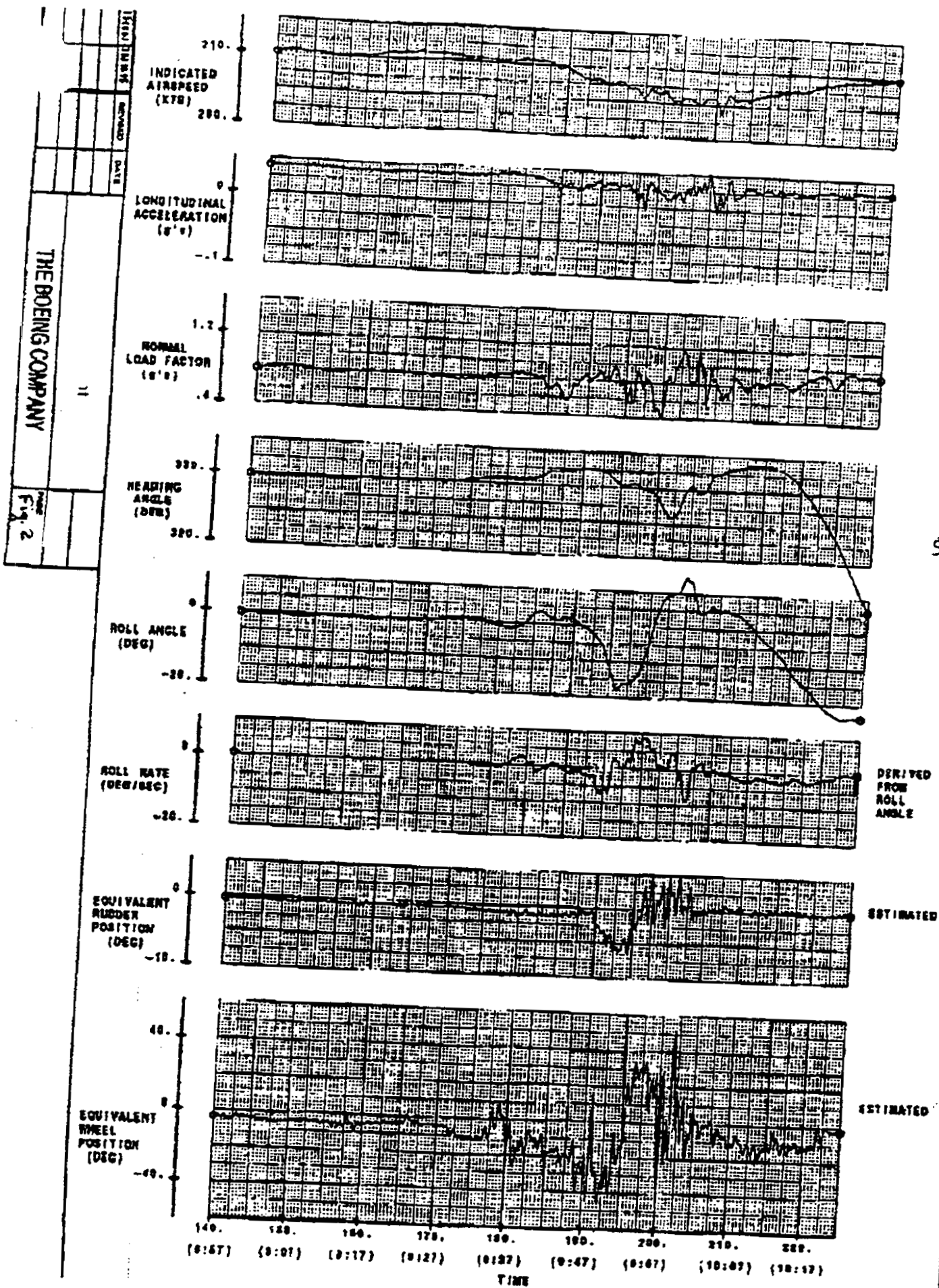


FIGURE 2