

(52-1)

96-0258TR

-ATA 0200-08

P.01/02

FROM

TECHNICAL/GROUND SAFETY
REPORT

C.A.A. OCCURRENCE NO.

1. DATE OF OCCURRENCE M 09 Y 96	2. TIME LOCAL 1730 DAY/NIGHT	3. A/C TYPE 737-500	4. BASIS REFERENCE
4. REGISTRATION	5. FLIGHT NO. BD 142	6. ROUTE BRU - LHR FROM TO DIVERTED	
7. AIRPORT/LOCATION LHR	8. TECH LOG REF 239345	9. A/C WEIGHT	
10. SIGNIFICANT WX RAIN / SNOW / ICING / FOG / HAIL	11. GROUND STATE DRY WET ICE SNOW SLUSH	ITEM NO.	KG
12. → PUSH-BACK → TAXI OUT → TAKE-OFF → MAINTENANCE → TOWING → PARKED → TAXI-IN UNATTENDED BELOW 1500FT			

13. SUMMARY (CONCISE DESCRIPTION OF THE EVENT) REPORT FROM FLT CREW READS:-
DESCENDING AT 220KTS. FROM FL80 TO FL70 A/C ROLLED RAPIDLY, BUT SLOWLY LEFT TO APPROX 50° A.O.B. WITH AUTOPILOT A1 ENGAGED. WE BELIEVE RUDDER PEDALS AND CONTROL YOKE POSNS WERE NEUTRAL. YAW DAMPER LIGHT REMAINED OFF. A/C RESPONDED TO MANUAL INPUTS. BOTH PILOTS AGREED THE MOTION WAS QUITE DIFFERENT FROM WAKE TURBULENCE. THE AUTOPILOT WAS RE-ENGAGED AND THERE WAS NO FURTHER REOCCURRENCE.

14. DESCRIPTION OF OCCURRENCE

ENG ACTION:- D.F.C.S. FLT FAULTS PAGE (ON FIDES) SHOWS NIL DEFECTS.

F.M.C. FLT FAULTS PAGE SHOWS NIL DEFECTS.

A.T. FLT FAULTS PAGE SHOWS NIL DEFECTS.

D.F.C.S. LIBRARY TEST 49 (LAND VERIFY) CARRIED OUT - NIL FAULTS.

A.T. CURRENT STATUS BITE CHECK CARRIED OUT - NIL FAULTS.

RUDDER TRIM SYSTEM FUNCTION CHECKED - FOUND SATIS.

AILERON TRIM SYSTEM FUNCTION CHECKED - FOUND SATIS.

YAW DAMPER SYSTEM BITE CHECKED - FAILED TEST N°1

NIL STOCK Y.B. COUPLER AVAILABLE. CFD RAISED 239346/1 REFERS.

N/C DOWNGRADED TO CRT1 LIMITS AS PRECAUTIONARY MEASURE.

F.B.R. DATA DUMP REQUESTED.

Any procedures, manuals, pubs (e.g. SIL, AD, SB etc.) directly relevant to occurrence and (when appropriate) compliance state of aircraft, equipment or documentation.

A/C CONSTRUCTORS NO. 25065	ENGINE TYPE/SERIES CFM 56	ETOPS APPROVED YES NO		AIRCRAFT BELOW 15000 FT ONLY - MAINTENANCE ORGANISATION 0181-745-4192 Tel No.	
COMPONENT/PART	MANUFACTURER	PART NO.	SERIAL NO.	MANUAL REF.	CONSEQUENT OR REPAIR ORGANISATION
ORGANISATION	NAME D. COOK	POSITION MAINT SUPER.	SIGNATURE <i>[Signature]</i>	DATE SEPT 96	

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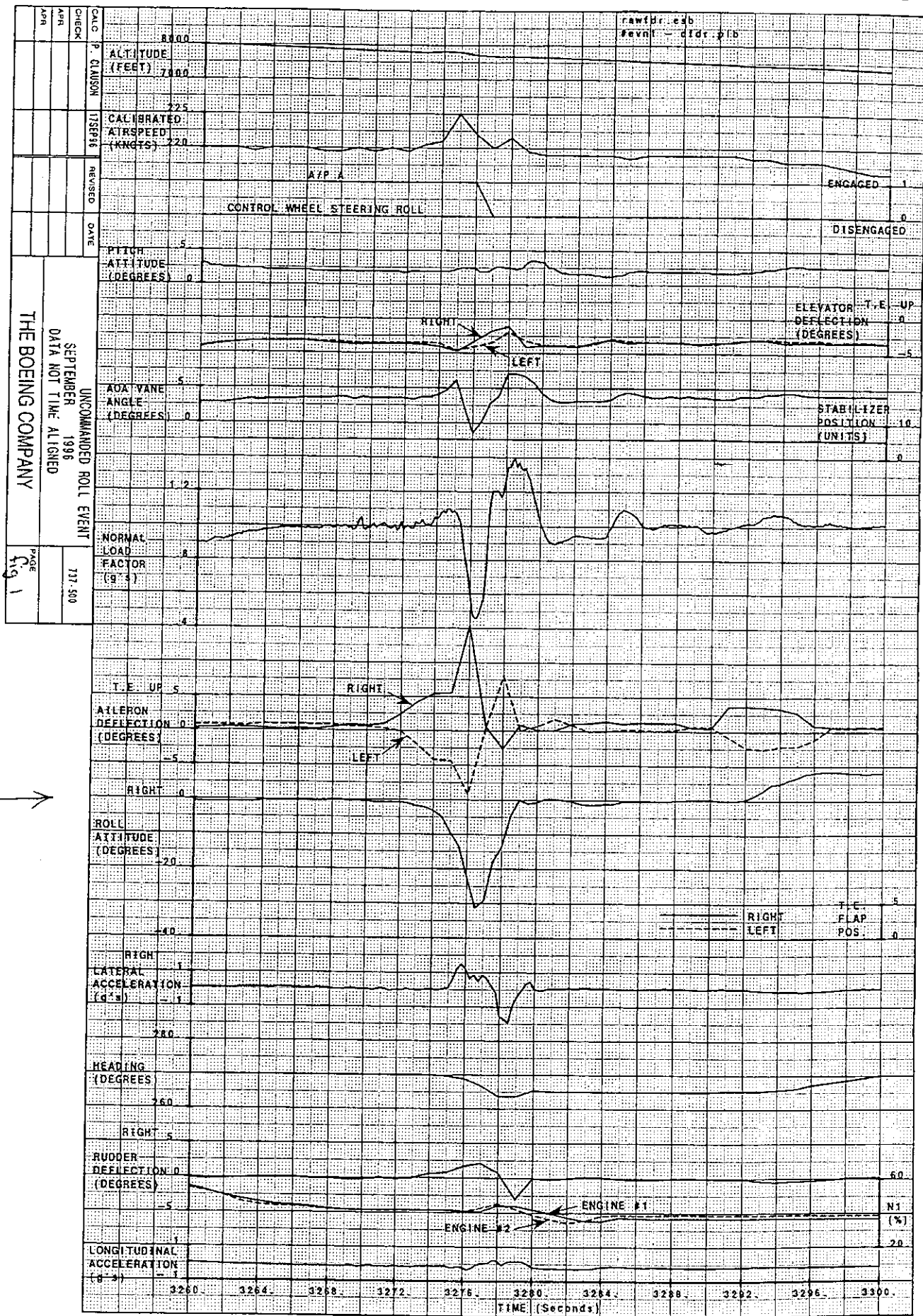


Fig 1

PLEASE ADVISE BOEING ACTIVITY REGARDING SUBJECT SYSTEM CHANGES.

RESPONSE:

BOEING IS INVOLVED IN REDESIGN OF THE YAW DAMPER COUPLER FOR THE 737 MODEL AIRPLANES. THE NEW YAW DAMPER COUPLER WILL BE RETROFITTABLE INTO EXISTING 737 MODEL AIRPLANES WITH MINOR WIRING CHANGES REQUIRED. THE NEW DESIGN WILL:

1. BE DIGITAL WITH DUAL PROCESSORS
2. HAVE DUAL SOLID STATE RATE SENSORS TO REPLACE THE RATE GYRO
3. HAVE BITE AND IN-FLIGHT FAULT MONITORING AND STORAGE
4. REQUIRE REVISION TO THE AUTOPILOT ACCESSORY UNIT OR INTEGRATED FLIGHT INSTRUMENT ACCESSORY UNIT
5. WILL REQUIRE A MINOR AMOUNT OF SHIELDED WIRING BE INSTALLED TO REPLACE EXISTING WIRING IN THE AFT FUSELAGE

OUR CURRENT SCHEDULE ANTICIPATES HAVING NEW YAW DAMPER COUPLER HARDWARE AVAILABLE APPROXIMATELY JUNE 1998, HOWEVER, WE ARE WORKING TO IMPROVE THE NEW YAW DAMPER COUPLER AVAILABILITY DATE. IF ADDITIONAL INFORMATION IS REQUIRED, PLEASE CONTACT US.

COTTRILLE/CROW/MIKE DIDONATO
CUSTOMER SERVICES DIVISION
BOEINGAIR M-7272 2H-95

SEP 96 0901

SEP 96 1451

DIR 617

/ATTN (617) M. DIDONATO MANAGER
/7/7/7/7 AIRLINE SUPPORT
/CC (BFSLHR) M. HAMILTON MGR M-7424
/CC (BRDLHR) E.W. BERTHIAUME REG DIR

96-0260TR SEP 96
ATA 0200-00 MODEL 737-500
IN-FLIGHT ATTITUDE EXCURSION - ROLL
REF /A/ -96-0258TR
AIRPLANE HOURS/CYCLES

THE REF ADDRESSED A SUBJECT EVENT OF THE DATUM 737 SEP 96. THE YAW DAMPER COUPLER WAS CHANGED ON THE DATUM 737 SEP 96 DUE IT HAD FAILED BITE TEST 1 SEP 96. THE APL RESUMED FLYING SEP AND FLEW WITHOUT PIREP UNTIL SEP WHEN A HYD SYST B EMDP HAD AN OVERHEAT WARNING. NO FAULT WAS FOUND AND THE APL RETURNED TO WHERE THE B EMDP WAS CHANGED AS PRECAUTIONARY.

ON A SUBSEQUENT FLIGHT INTO LHR A SEP 96 TECH LOG ENTRY STATED "A/C DEPARTED FROM NORMAL FLIGHT ON TWO OCAISIONS". VERBAL RREPORTS STATED THAT A ROLL OCCURRED TO THE RIGHT OF 20 DEG AND A ROLL LEFT TO 30 DEG. IAS RESPECTIVELY WERE 250 KTS AND 210 KTS, ALTITUDE FL 160. FDR DATA DUMPS WERE REQUESTED AS WERE RADAR PLOTS.

DUE CONCERNS REGARDING THIS EVENT, THE REF EVENT, BOTH ON THE SAME 737, OTHER RUDDER/YAW DAMPER COUPLER REMOVALS, ETC (REPORTED UNDER ATA 2221-20) REQUESTED DIRECT BOEING INVOLVEMENT BOTH VIA TELECON AND ON-SITE TECH ASSIST.

THE WAS ALSO INVOLVED AND REQUESTED SIMILAR DATA PLUS THE CVR REMOVAL. THE 737 WAS "IMPOUNDED" AT UNTIL FURTHER INVESTIGATION WITH BOEING PERSONNEL ATTENDING.

BEING SEATTLE SENT TWO ENGINEERRING SPECIALISTS, BEN SMITH, FLT CONT, AND BILL WATTERS, AVIONICS. TELECONS WERE ALSO HELD BETWEEN CSE, DUWAMISH, ENGINEERING AND ROCKCASTLE BCS, (DALE WILEN) WAS ALSO ON-SITE THE NIGHT OF SEP.

THE SPECIALISTS ARRIVED SEP AND IMMEDIATELY STARTED

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