

NTSB/AAR-98-04

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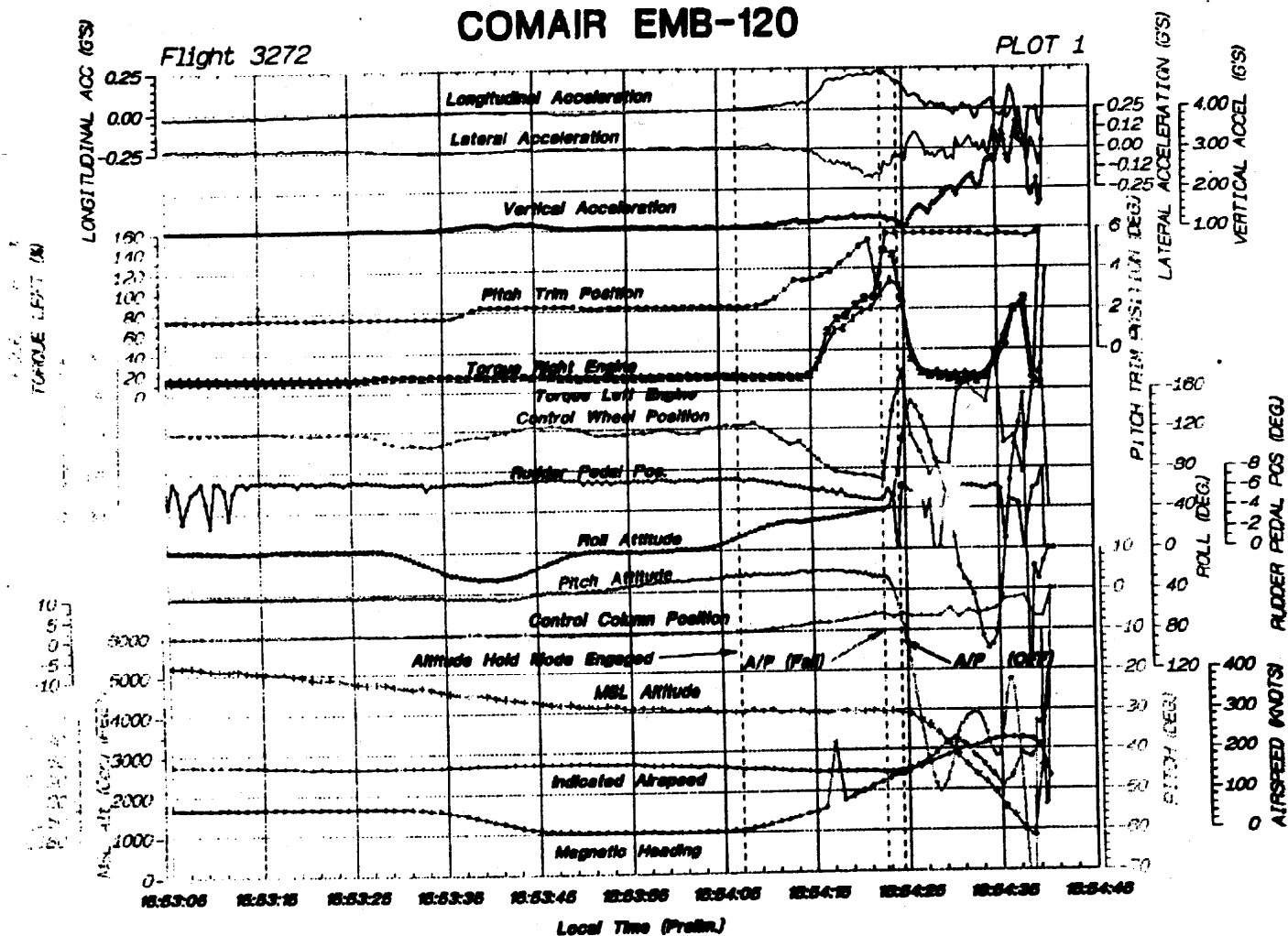
APPENDIX C—FLIGHT DATA RECORDER PARAMETERS/PLOTS

PARAMETER NAME	RANGE	RESOLUTION	INTERVAL	STORAGE
1. TIME	25 HOURS	1/768 SEC.	1/768	1 sf all
2. PRESSURE ALTITUDE	-1000 - 40000 FT.	10 FT.	1	23 (upper) sf all 5 (lower) sf all
3. AIRSPEED	60 - 450 KNOTS	1 KNOT	1	18 sf all
4. VERTICAL ACCELERATION	-3 - +6 "G"	0.0023 "G"	1/8	4, 12, 20, 28, 36, 44, 52, 60 sf all
5. LATERAL ACCELERATION	-1 - +1 "G"	0.0005 "G"	1/4	8, 24, 40, 56 sf all
6. LONGITUDINAL ACCELERATION	-1 - +1 "G"	0.0005 "G"	1/4	9, 21, 41, 57 sf all
7. MAGNETIC HEADING	0 - 360	0.356	1	7 sf all
8. PITCH ATTITUDE	±75	.087	1/4	10, 26, 42, 58 sf all
9. ROLL ATTITUDE	±180	.087	1/2	17, 49 sf all
10. PITCH TRIM	-9 - +50	.0022	1/2	14 sf all
11. CONTROL COLUMN POSITION	8 (FWD), 12 (AFT)	.0058	1	6 (lt.), 38 (rt.) sf all
12. CONTROL WHEEL POSITION	52 (Lt.), 52 (Rt.)	.0549	1	11 (lt.), 43 (rt.) sf all
13. RUDDER PEDAL POSITION	16 (Lt), 16 (Rt.)	.0078	1	13 (lt.), 45, (rt.) sf all
14. FLAP POSITION	0 - 45	.0186	2	37 sf 1,3
15. STATIC AIR TEMP.	-99 - +50 C	.1576	2	37 sf 2,4
16. FUEL FLOW (LEFT & RIGHT)	0 - 1200 (PPH)	.2930	1	50 (lt.), 51 (rt.) sf all
17. NH (LEFT & RIGHT)	0 - 120%	.0359	1	15 (lt.), 16 (rt.) sf all
18. NL (LEFT & RIGHT)	0 - 120%	.0369	1	31 (lt.), 32 (rt.) sf all
19. PROP IMBAL.(LEFT & RIGHT)	0. - 1.11 "G"	.0002	2	33 (lt.), 33 (rt.) sf1,3 , sf 2,4
20. PROP RPM (LEFT & RIGHT)	25. - 120%	.1	1	47 (lt.), 48 (rt.) sf all
21. T6 TEMP (LEFT & RIGHT)	0 - 1200 C	.2930	1	19 (lt.), 35 (rt.) sf all
22. ENG. TORQUE (LEFT & RIGHT)	0 - 150%	.0366	1	39 (lt.), 55 (rt.) sf all
23. ANGLE OF ATTACK (#1 & #2)	× 30 °	.0161	1/2	22,54 (#1) sf all 27,59 (#2) sf all
24. RADIO ALTITUDE	-20 to 2,500 ft.	.2	1	46 sf all
25. GLIDE SLOPE DEVIATION #1	×.22 DDM	.0004	1	29 sf all
26. LOCALIZER DEVIATION #1	×.22 DDM	.0004	1	21 sf all
27. GLIDE SLOPE DEVIATION #2	×.22 DDM	.0004	1	61 sf all
28. LOCALIZER DEVIATION #2	×.22 DDM	.0004	1	34 sf all
29. NAV. #1 FREQUENCY SELECTED	MHz	BCD	4	53 sf 1
30. NAV. #2 FREQUENCY SELECTED	MHz	BCD	4	53 sf 3

31. DME #1 DISTANCE	NM	.125	4	53 sf 2
32. DME #2 DISTANCE	NM	.125	4	53 sf 4
PARAMETER NAME	RANGE	RESOLUTION	SAMPLING INTERVAL (SECONDS)	WORD & SUBFRAME (sf) LOCATION(S)
DISCRETE PARAMETERS				
33. AIR/GROUND SWITCH	1 = AIR	N/A	1	30 (bit 7) sf all
34. BETA MODE (LEFT & RIGHT)	1 = ENGAGED	N/A	1	(lt.) 30 (bit 5) sf all (rt.) 30 (bit 6) sf all
35. BLEED AIR (LEFT & RIGHT)	1 = CLOSED	N/A	1	(lt.) 30 (bit 11) sf all (rt.) 30 (bit 12) sf all
36. CONDITION LEVER POS. (Lt.&Rt.)	1 = ON	N/A	1	(lt.) 30 (bit 8) sf all (rt.) 30 (bit 9) sf all
37. EVENT MARKER	1 = ON	N/A	1	30 (bit 10) sf all
38. PRESS TO TALK (Ch. 1 THRU 4)	1 = TALK 0 = OFF	N/A	1	30 (bit 1-4) sf all
39. HYDRAULIC LOW PRESS #1&# 2	0 = LOW 1 = NORMAL	N/A	1	#1 - 3 (bit 1) sf all #2 - 54 (bit 2) sf all
40. CONDITION LEVER POS. #1 & #2	1 = POWER 0 = SHUT OFF	N/A	1	#1-30(bit 8) sf all #2-30(bit 9) sf all
41. LANDING GEAR POSITION	1 = NOT DOWN 0 = DOWN	N/A	4	3 (bit 2) sf 4
42. BLEED CONDITION (Lt. & Rt.)	0 = OPERATING 1 = NOT OPERATING	N/A	1	Lt. 30 (bit 11) sf all Rt. 30 (bit 12) sf all
43. PW118A/PW118 SELECT	1 = PW118A 0 = PW118	N/A	4	3 (bit 3) sf 4
44. AUTO PILOT ENGAGE	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	8 (bit 1) sf all
45. ENGAGE AUTO PILOT	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	49 (bit 1) sf all
46. AUTO PILOT SELECTED	0 = A/P #1 1 = A/P #2	N/A	1	8 (bit 2) sf all
47. AUTO PILOT DISCONNECT	0 = DISCONNECTED 1 = ENGAGED	N/A	1	38 (bit 1) sf all
48. AUTO PILOT FAIL MODE	0 = FAIL 1 = NOT FAIL	N/A	1	43 (bit 1) sf all
49. ALTITUDE PRE SELECT (ARM)	0 = ARMED 1 = NOT ARMED	N/A	1	6 (bit 1) sf all
50. CAPTURE TRACK	0 = CAPTURE 1 = NOT CAPTURED	N/A	1	6 (bit 2) sf all
51. NAV -1 ARM	0 = ARM 1 = NOT ARM	N/A	1	7 (bit 1) sf all
52. NAV -1 CAPTURE	0 = CAPTURE 1 = NOT CAPTURE	N/A	1	7 (bit 2) sf all
53. GLIDESLOPE ARM	0 = ARM 1 = NOT ARM	N/A	1	9 (bit 1) sf all
54. GLIDESLOPE CAPTURE	0 = CAPTURE 1 = NOT CAPTURE	N/A	1	9 (bit 2) sf all
55. GLIDESLOPE EXT	0 = EXT 1 = NOT EXT	N/A	1	10 (bit 1) sf all
56. IAS HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	10 (bit 2) sf all
57. ALT HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	11 (bit 1) sf all
58. SYNC SWITCH	0 = SWITCH 1 = NOT SWITCH	N/A	1	11 (bit 2) sf all

PARAMETER NAME	RANGE	RESOLUTION	SAMPLING INTERVAL (SECONDS)	WORD & SUBFRAME (sf) LOCATION(S)
59. APPROACH ARM	0 = ARM 1 = NOT ARM	N/A	1	13 (bit 1) sf all
60. APPROACH CAPTURE	0 = CAPTURE 1 = NOT CAPTURE	N/A	1	13 (bit 2) sf all
61. GO AROUND ROLL	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	17 (bit 1) sf all
62. GO AROUND PITCH	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	17 (bit 2) sf all
63. VERTICAL SPEED HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	22 (bit 1) sf all
64. HEADING HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	25 (bit 1) sf all
65. HEADING SELECT	0 = SELECT 1 = NOT SELECT	N/A	1	25 (bit 2) sf all
66. HALF BANK	0 = SELECT 1 = NOT SELECT	N/A	1	22 (bit 2) sf all
67. DEAD RECKONING	0 = SELECT 1 = NOT SELECT	N/A	1	26 (bit 1) sf all
68. BACK COURSE	0 = SELECT 1 = NOT SELECT	N/A	1	26 (bit 2) sf all
69. PITCH HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	27 (bit 1) sf all
70. ROLL HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	27 (bit 2) sf all
71. CLIMB HOLD	0 = HOLD 1 = NOT HOLD	N/A	1	33 (bit 1) sf all
72. PITCH TRIM FAIL	0 = FAIL 1 = NOT FAIL	N/A	1	33 (bit 2) sf all
73. OUT OF TRIM ELEVATOR	0 = OUT OF TRIM 1 = IN TRIM	N/A	1	41 (bit 1) sf all
74. OUT OF TRIM AILERON	0 = OUT OF TRIM 1 = IN TRIM	N/A	1	41 (bit 2) sf all
75. OUT OF TRIM RUDDER	0 = OUT OF TRIM 1 = IN TRIM	N/A	1	42 (bit 1) sf all
76. VBAR INVUE	0 = INVUE 1 = NOT INVUE	N/A	1	42 (bit 2) sf all
77. TRIM RUN MODE	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	43 (bit 2) sf all
78. DESCENT MODE	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	45 (bit 1) sf all
79. SOFT RIDE MODE	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	45 (bit 2) sf all
80. GO AROUND MODE	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	54 (bit 1) sf all
81. GPWS #1	0 = WARNING 1 = NORMAL	N/A	1	24 (bit 1) sf all
82. GPWS #2	0 = WARNING 1 = NORMAL	N/A	1	24 (bit 2) sf all
83. GPWS #3	0 = WARNING 1 = NORMAL	N/A	1	40 (bit 1) sf all
84. MASTER WARNING	0 = WARNING 1 = NORMAL	N/A	1	40 (bit 2) sf all
85. MASTER CAUTION	0 = CAUTION 1 = NORMAL	N/A	1	56 (bit 1) sf all

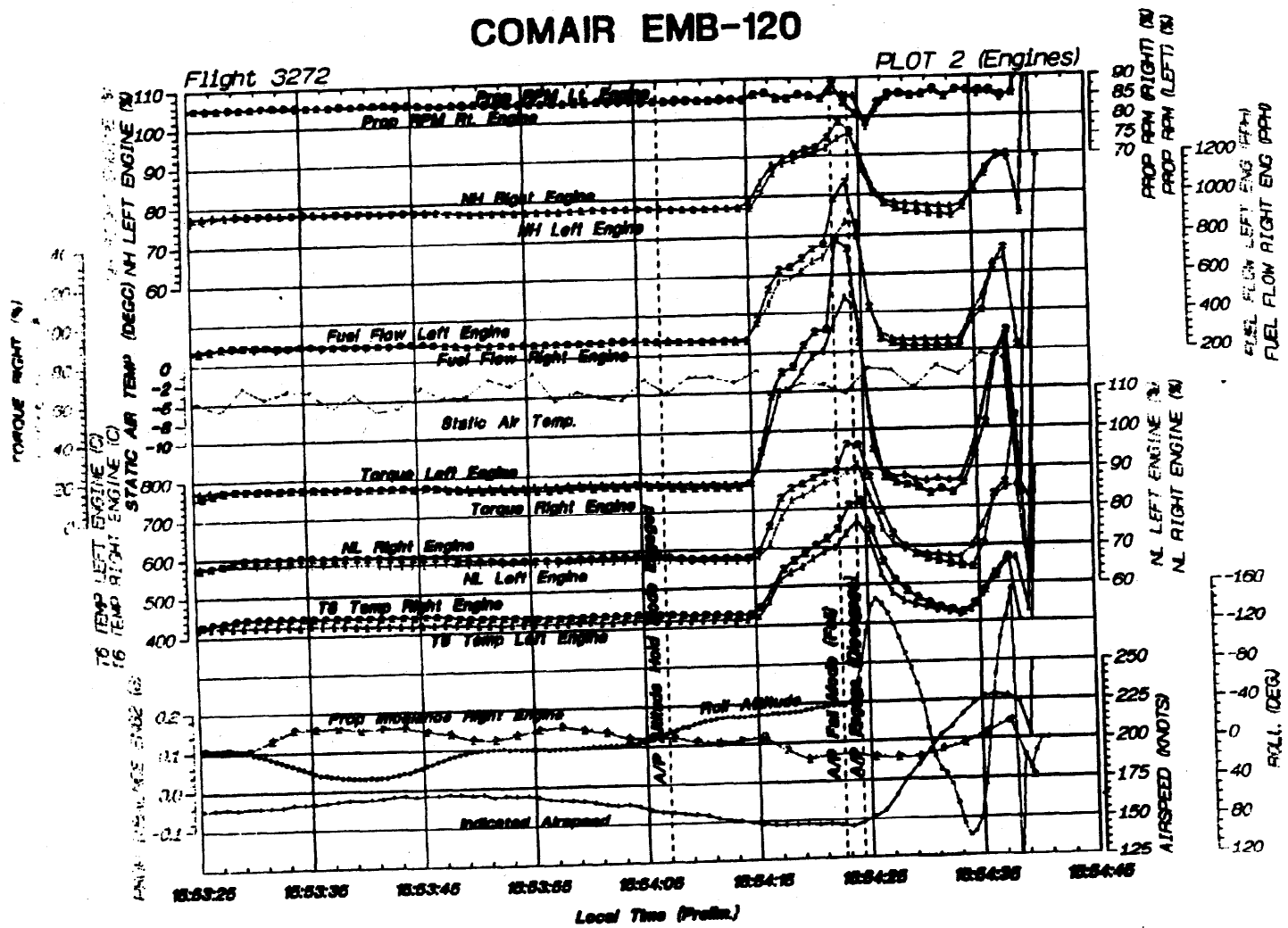
PARAMETER NAME	RANGE	RESOLUTION	SAMPLING INTERVAL (SECONDS)	WORD & SUBFRAME (sf) LOCATION(S)
86. MARKER INNER #1	0 = ON 1 = OFF	N/A	1	57 (bit 1) sf all
87. MARKER MIDDLE #1	0 = ON 1 = OFF	N/A	1	57 (bit 2) sf all
88. MARKER OUTER #1	0 = ON 1 = OFF	N/A	1	58 (bit 1) sf all
86. MARKER INNER #2	0 = ON 1 = OFF	N/A	1	58 (bit 2) sf all
87. MARKER MIDDLE #2	0 = ON 1 = OFF	N/A	1	59 (bit 1) sf all
88. MARKER OUTER #2	0 = ON 1 = OFF	N/A	1	59 (bit 2) sf all
89. YAW DAMPER DISCONNECT	0=DISCONNECTED 1 = CONNECTED	N/A	1	38 (bit 2) sf all
90. YAW DAMPER	0 = ENGAGED 1 = NOT ENGAGED	N/A	1	49 (bit 2) sf all
91. AIRCRAFT ID	N/A	N/A	4	62 (bit 1-8) sf 1
92. FLIGHT NO.	N/A	N/A	4	64 (bit 1-4) sf 2 64 (bit 1-12) sf 3-
93. 429/CSDB SELECT	0 = ARINC 429 1 = CSDB	N/A	4	3 (bit 6) sf 4
94. 120/123 SELECT	0 = CBA-123 1 = EMB-120	N/A	4	3 (bit 4) sf 4
95. 145 SELECT	0 = SELECTED 1 = NOT SELECTED	N/A	4	3 (bit 5) sf 4
96. GMT MIN:SEC	N/A	N/A	1	2 sf all
97. GMT HOURS	N/A	N/A	4	3 sf 1
98. DAY MONTH	N/A	N/A	4	3 sf 2
99. YEAR	N/A	N/A	4	3 sf 3



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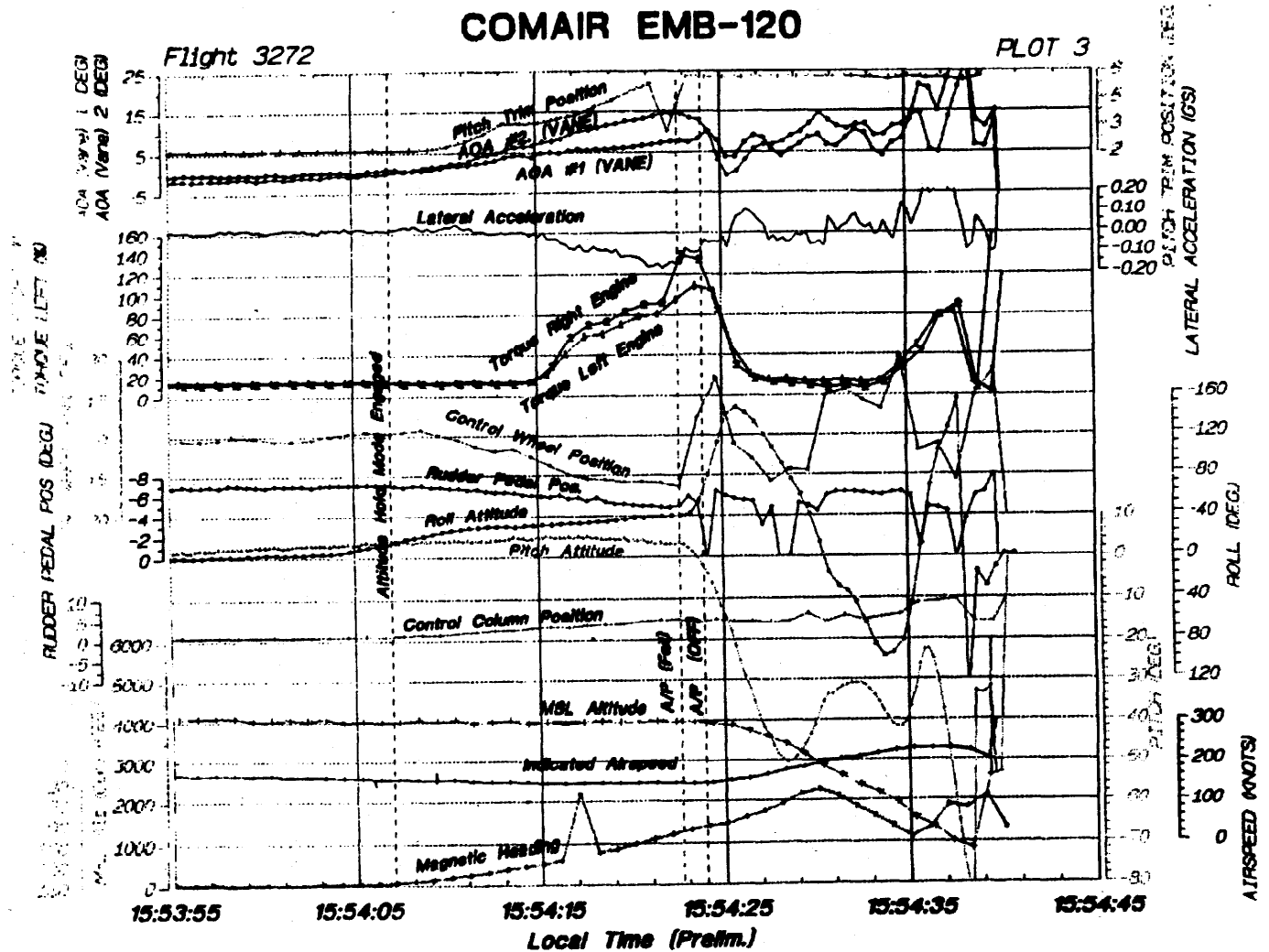
National Transportation Safety Board

COMAIR EMB-120



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