

DOCKET NO.: SA-519
EXHIBIT NO. 8D

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

POWERPLANTS GROUP CHAIRMAN'S FACTUAL REPORT
JT8D-217C SN 718427 TEST CELL PERFORMANCE DATA

American Airlines flight 1420
Little Rock, Arkansas
June 1, 1999

DCA99MA060

American Airlines
Trend Analysis Data
Test Log No. 5
JT8D-217C
V.1.37.01

TEST CELL CORR. FACTORS: ESO REV.

S/N-DATE-TC : 718427-06/09/99-TC1

RACK NUMBER: R275S REPAIR STANDARD: HEAVY MAINTENANCE TOTAL RUN TIME 7.23 MM.SS

BARE NON-MAPS FUEL CONSUMED 18 GALS DEW POINT 69 F

OPERATOR: JD BLACKFORD
OBSERVER: M ROSA

POWER POINT TEST POINT NO. SAMPLE TIME	GRD IDLE #0 13:52:00	FLT IDLE #2 13:52:46	MAX CRZ #4 13:54:40	MAX CON #5 13:56:01	NORM T/O #6 13:56:22
PBAR	PSIA 14.372	14.371	14.371	0.000	0.000
TT2	DEG F 86.2	85.5	86.4	0.0	0.0
TT4C / TT3C	RATIO -1.075	-1.337	-1.684	0.0000	0.0000
TT7C / TT4C	RATIO -1.561	-1.280	-1.340	0.0000	0.0000
PS3.2	IN.HGA 38.83	117.38	198.21	0.00	0.00
PS4 ABS.	IN.HGA 29.30	28.96	28.28	0.00	0.00
EGT CORRECTED	DEG F 734	749	986	0	0
THRUST CORR.	LBS 838	8750	20075	0	0
WF CORRECTED	PPH 924	4569	10405	0	0
SPEC FUEL CONSUMP	RATIO 1.102	0.523	0.518	0.000	0.000
EPR AVG	RATIO 1.010	1.360	1.938	0.0000	0.0000
N1 FULL CORRECTED	RPM 2009	5714	7491	0	0
N2 FULL CORRECTED	RPM 6239	10267	11507	0	0
N1/N2 SPEED RATIO	RATIO 0.3221	0.5566	0.6510	0.0000	0.0000
LP COMP PS3.2/PT2	RATIO 1.305	4.071	6.962	0.0000	0.0000
HP COMP PS4/PS3.2	RATIO 0.7545	0.2467	0.1428	0.0000	0.0000
PS4/PT7	RATIO 0.9753	0.7373	0.5128	0.0000	0.0000
TURB. COOLING AIR	RATIO 1.459	5.798	10.80	0.0000	0.0000
PBR	PSIG 0.0447	0.2227	0.4268	0.0000	0.0000
MOP	PSIG 46.8	50.2	51.0	0.0	0.0
WAT	0.0000	0.0000	0.0000	0.0000	0.0000
WAE	0.0000	0.0000	0.0000	0.0000	0.0000

APPENDIX 3

PT4	PSIA	14.39	14.41	14.39	14.40	14.42	0.00	0.00	0.00	0.00
PT4	IN.HG	0.03	0.07	0.04	0.06	0.09	0.00	0.00	0.00	0.00
PT4	IN.HGA	29.29	29.33	29.30	29.32	29.35	0.00	0.00	0.00	0.00
PT6	PSIG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PT6	PSIA	14.40	14.40	14.40	14.41	14.42	0.00	0.00	0.00	0.00
PT6	IN.HG	0.06	0.06	0.06	0.07	0.10	0.00	0.00	0.00	0.00
PT6	IN.HGA	29.32	29.32	29.32	29.33	29.35	0.00	0.00	0.00	0.00
PT7	PSIG	0.4	0.9	4.9	12.8	12.7	0.0	0.0	0.0	0.0
PT7	PSIA	14.75	15.29	19.27	27.13	27.10	0.00	0.00	0.00	0.00
PT7	IN.HG	0.77	1.87	9.98	25.98	25.92	0.00	0.00	0.00	0.00
PT7	IN.HGA	30.04	31.14	39.24	55.24	55.18	0.00	0.00	0.00	0.00
PB (BURNER)	PSIG	15.6	34.5	123.4	234.1	234.3	0.0	0.0	0.0	0.0
PB (BURNER)	PSIGA	29.93	48.89	137.75	248.57	248.78	0.00	0.00	0.00	0.00
PB (BURNER)	IN.HG	31.68	70.28	251.21	476.83	477.26	0.00	0.00	0.00	0.00
PB (BURNER)	IN.HGA	60.94	99.54	280.47	506.09	506.52	0.00	0.00	0.00	0.00
PCP	PSIG	6.6	16.1	68.1	137.3	135.6	0.0	0.0	0.0	0.0
PCP	PSIA	20.99	30.49	82.46	151.73	150.09	0.00	0.00	0.00	0.00
PCP	IN.HG	13.47	32.81	138.64	279.67	276.32	0.00	0.00	0.00	0.00
PCP	IN.HGA	42.74	62.07	167.90	308.93	305.58	0.00	0.00	0.00	0.00
PCP	IN.H2O	183.18	446.04	*84.78	*82.20	*56.69	0.00	0.00	0.00	0.00
PBR	PSIG	0.0447	0.0830	0.2227	0.3866	0.4268	0.0000	0.0000	0.0000	0.0000
WF CORRECTED / BP	RATIO	30.85	28.41	33.20	42.56	41.81	0.0000	0.0000	0.0000	0.0000
VIB INLET 40HZ HP	MILS	0.08	0.30	0.54	1.03	1.02	0.00	0.00	0.00	0.00
VIB REAR 40HZ HP	MILS	0.67	0.92	0.81	1.53	1.51	0.00	0.00	0.00	0.00
VIB INL. 155HZ HP	MILS	0.03	0.10	0.24	0.77	0.72	0.00	0.00	0.00	0.00
VIB REAR 155HZ HP	MILS	0.20	0.19	0.42	0.94	0.90	0.00	0.00	0.00	0.00
VIB INLET N1 TRAC	MILS	0.07	0.25	0.39	0.58	0.53	0.00	0.00	0.00	0.00
VIB INLET N1 TRAC	RPM	1871	2921	5674	7489	7497	0	0	0	0
MAX INLET N1 TRAC	MILS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N10MX INL N1 TRAC	RPM	0	0	0	0	0	0	0	0	0
N20MX INL N1 TRAC	RPM	0	0	0	0	0	0	0	0	0
VIB REAR N1 TRAC	MILS	0.35	0.34	0.41	1.27	1.11	0.00	0.00	0.00	0.00
VIB REAR N1 TRAC	RPM	10054	15118	15376	15376	15376	0	0	0	0
MAX REAR N1 TRACK	MILS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N10MX RR N1 TRACK	RPM	0	0	0	0	0	0	0	0	0
N20MX RR N1 TRACK	RPM	0	0	0	0	0	0	0	0	0
VIB INLET N2 TRAC	MILS	0.00	0.07	0.18	0.59	0.56	0.00	0.00	0.00	0.00
VIB INLET N2 TRAC	RPM	6196	7958	10383	11586	11634	0	0	0	0
MAX INLET N2 TRAC	MILS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N10MX INL N2 TRAC	RPM	0	0	0	0	0	0	0	0	0
N20MX INL N2 TRAC	RPM	0	0	0	0	0	0	0	0	0
VIB REAR N2 TRAC	MILS	0.54	0.13	0.33	0.43	0.38	0.00	0.00	0.00	0.00
VIB REAR N2 TRAC	RPM	6187	7949	10368	11573	11621	0	0	0	0
MAX REAR N2 TRACK	MILS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N10MX RR N2 TRACK	RPM	0	0	0	0	0	0	0	0	0
N20MX RR N2 TRACK	RPM	0	0	0	0	0	0	0	0	0
OIL IN TEMP	DEG C	59	60	64	66	70	0	0	0	0
OEC OIL QUANTITY	QUARTS	19.2	19.8	20.3	20.3	20.8	0.0	0.0	0.0	0.0
MOP	PSIG	46.8	49.2	50.2	50.9	51.0	0.0	0.0	0.0	0.0
POWER LEVER ANGLE	DEG	15.7	15.7	-9.3	54.5	54.7	0.0	0.0	0.0	0.0
FUEL SG	RATIO	0.8001	0.8001	0.8001	0.8002	0.8002	0.0000	0.0000	0.0000	0.0000
FUEL DENSITY	LB/GAL	6.659	6.659	6.659	6.660	6.660	0.0000	0.0000	0.0000	0.0000

Appendix 3

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 | STANDARD DAY PERFORMANCE DATA — WITH CELL CORRECTION |
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POWER POINT TEST POINT NO. SAMPLE TIME	GRD IDLE #0	PART PWR #1	FLT IDLE #2	GRD IDLE #3	MAX CRZ #4	MAX CON #5	NORM T/O #6	MAX T/O #7	GRD IDLE #8
	13:52:00	13:52:46	13:54:40	13:56:01	13:56:22	00:00:00	00:00:00	00:00:00	00:00:00
THRUST CORR.	LBS	838	1945	8750	20096	20075	0	0	0
WF CORRECTED	PPH	924	1388	4569	10585	10405	0	0	0
N1 FULL CORRECTED	RPM	2009	2986	5714	7491	7491	0	0	0
N2 FULL CORRECTED	RPM	6239	7933	10267	11467	11507	0	0	0
EGT CORRECTED	DEG F	734	657	749	900	986	0	0	0
TT7C / 519	DEG F	1.41	1.27	1.44	1.89	1.90	0.00	0.00	0.00
PT3.2/PT2	RATIO	0.9854	1.002	1.018	1.030	1.031	0.0000	0.0000	0.0000
PT4/PT2	RATIO	0.9847	1.002	1.017	1.029	1.030	0.0000	0.0000	0.0000
PT6/PT7	RATIO	0.9761	0.9417	0.7473	0.5307	0.5318	0.0000	0.0000	0.0000
LP COMP PS3.2/PT2	RATIO	1.305	1.644	4.071	6.996	6.962	0.0000	0.0000	0.0000
HP COMP PS4/PS3.2	RATIO	0.7545	0.6108	0.2467	0.1437	0.1428	0.0000	0.0000	0.0000
PS4/PT7	RATIO	0.9753	0.9436	0.7373	0.5183	0.5128	0.0000	0.0000	0.0000
PS4/PT2	RATIO	0.9848	1.004	1.004	1.005	0.9939	0.0000	0.0000	0.0000
N1/N2 SPEED RATIO	RATIO	0.3221	0.3763	0.5566	0.6533	0.6510	0.0000	0.0000	0.0000
TURB. COOLING AIR	RATIO	1.459	2.112	5.798	10.79	10.00	0.0000	0.0000	0.0000
TOTAL AIRFLOW	PPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CORE AIRFLOW	PPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPEC FUEL CONSUMP	RATIO	1.102	0.714	0.523	0.526	0.518	0.000	0.000	0.000