

DOCKET NO. SA-510

EXHIBIT NO. 7B

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

STRUCTURAL DEBRIS MAPPING AND ACCIDENT SITE
DOCUMENTATION

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USAIR FLIGHT 427 ACCIDENT INVESTIGATION

STRUCTURAL DEBRIS MAPPING

Map Location	Part Identification	Quadrant
1	Tail Section With Elevator & Rudder	A
2	LH Engine	C
3	Engine Turbine Wheel	C
4	Ignitor Box	C
5	LH Upper Wing Skin Section	C
6	Engine Strut With MLG Carriage	C
7	Flap Gear Box	C
8	Nose Landing Gear Strut	D
9	NLG Tire	D
10	Cockpit Area	D
11	Slat Actuator	D
12	NLG Tire & CVR Panel	D
13	Control Column	C
14	Seat Belt Attach Harness	C
15	Nose Landing Gear Steering Linkage	C
16	Cockpit Windshield Frame	D
17	Steel Attach Fitting	D
18	Door Frame	C
19	Electronic Component Ref: TRA 67A	C
20	Cockpit - Approach Plates	C
21	Engine Cowl Segment With Thrust Reverser Seals	C
22	Battery	C
23	Escape Slide Ref: S/N 1769	C
24	Overwing Emergency Exit Door	C
25	Outboard End Of LH Wing Ground Scar	C
26	Aft Flap Section	C
27	Aileron Section	C
28	Wing Tip	C
29	Aileron Bell Crank	C
30	Portable Oxygen Bottle Ref: P/N 03504	D
31	Slat Actuator	D
32	Large Fuselage Skin Panel From Crown Area With USAir Logo On It Size: 20' x 10'	D
33	TCAS Antenna	D
34	Wing Leading Edge Slat Track	D

STRUCTURAL DEBRIS MAPPING

Map Location	Part Identification	Quadrant
35	Actuator Ref: YT930B23/YS634	D
36	Jump Seat Fitting	D
37	Nose Landing Gear Actuator	D
38	Ref: P/N 69-41859-1	D
39	DAA #1	D
40	Upper Fuselage Skin Panel With Letters "USA" On It	D
41	Fuselage Skin Panel Size: 6' x 8'	D
42	VIB Monitor	D
43	Pedestal Com Heading 127.25 (Selected)/130.92	D
44	Pressure Controller Ref: 02106	D
45	Temperature Control Box	D
46	Electronic Box	D
47	Gear With DC Motor	D
48	Bearing - Unknown Location	D
49	Aluminum Block/Stop	D
50	VHF Antenna	D
51	Fuselage Skin Panel In Tree	D
52	Spoiler Panel	C
53	Upper Wing Skin Panel Segment Near Fuselage With Non-Skid Paint On It	C
54	#2 Engine (Portion)	A
55	#2 Engine (Portion)	A
56	RH Wing Aft Spar Segment Size: 20'	A
57	RH Wing Walking Beam	A
58	Aft Skin Panel Under Aft Svc. Door	B
59	Aft Service Door	B
60	RH Aft Skin Panel With Lower Door Jamb Section For Aft Svc. Door	B
61	MLG Carriage Ref: 65-46100-56	B
62	Inboard Flap Section Ref: 69-39230-1 Jackscrew Dimension = 5 1/2"	B
63	Thrust Reverser Cascade Panel Section	B
64	Canoe Fairing	B
65	LH Inboard Wing Aft Spar Section With Walking Beam	B
66	Upper Wing Skin Panel Section With No-Skid Paint	B

STRUCTURAL DEBRIS MAPPING

Map Location	Part Identification	Quadrant
67	Fuselage Skin Panel With Reinforced 1" Dia. Circular Cutouts	B
68	Horizontal Stabilizer Wing Tip Ref: 65C25141-7	B
69	Elevator Aft Trailing Edge Panel Ref: 65C27487-927	B
70	Lower Fuselage Skin Panel At Aft Pressure Bulkhead (Fwd Of Bulkhead)	B
71	Lower Fuselage Skin Panel At Aft Pressure Bulkhead (Aft Of Bulkhead)	B
72	Aft Tail Skin Panel	A
73	Lower Skin Panel At Aft Pressure Bulkhead By APU	A
74	Flight Control Fitting Ref: 65-51250-8	B
75	Wing Tank Fuel Transfer Section	A
76	RH Aft Skin Panel With Tail Number On It	B
77	Forward RH Service Door Found In 2 Pieces	D
78	Emergency Slide	D
79	Nose Landing Gear Drag Link	D
80	Wing Trailing Edge Section With Edge Seal For Flaps	B
81	Geared Assy. Ref: 65-51510-1	B
82	Small Wing Debris	B
83	Slat Leading Edge Section	A
84	RH Wing Flap Track	A
85	Main Landing Gear Tire	A
86	Wing Root Structure	A
87	Wing Bulkhead With Crossfeed Valve	A
88	Section Of Wing Root Structure	A
89	Wing Leading Edge Slat Mechanism	A
90	Section Of Upper Wing Skin With Non-Skid Paint On It	A
91	Upper Fuselage Skin Panel With Window Cutouts Size: 8' x 6'	A
92	Lower Fuselage Skin Panel With Outline Of Antennae Fairing At Centerline Size: 12' x 10'	A
93	Thrust Reverser Cowl Section Size: 4' x 3'	A
94	Fuselage Skin Window Cutout	A
95	Crew Oxygen Bottle	A
96	Access Door	B
97	Aileron Section Wing Tip	C

STRUCTURAL DEBRIS MAPPING

Map Location	Part Identification	Quadrant
98	Aileron Section	C
99	Aileron Section	C
100	Flight Control Hinge Fitting Ref: 65-46457-6	C
101	Wing Trailing Edge Panel Segment	C
102	Engine Cowling Segment	C
103	Landing Light Housing	C
104	Wing Skin Panel Segment Surrounding Landing Light Ref: 65-73719-505A	C
105	Fuselage Skin Panel Segment Under Window Cutout	C
106	Fuselage Skin Panel With Wing Illumination Light	C
107	Escape Slide	C
108	Door Handle	D
109	Overwing Emergency Exit Door	D
110	Upper Wing Skin Panel Sections	A
111	Wing Fuel Access Panel	A
112	MLG Door Hinge Ref: 65C28167-16	A
113	Right Wing Spar Segment	A
114	Gear Box With Gears, Lube Fittings, Etc.	A

TREE DAMAGE

Tree A - a large branch was broken downward at the trunk approx. 40 feet up.

Tree B - several small branches, on the North side of the tree, were broken at a point above the ground scar. The angle of breaks were nearly vertical (similar to Tree D)

Tree C - location shown on wreckage diagram. Documentation of strikes were not available tree was removed from wreckage site before angle of limb breaks could be measured.

Tree D - several branches from the north face were broken at heights from approx. 30-40 feet; the lower broken branches extended slightly farther than the upper broken branches.

Tree E - several branches broken, especially on the northeast side of the tree; however, some small branches on the west side were undamaged. **Tree F** - contained heavy soot damage; two main branches broken off at a height of approx. 25 and 35 feet; contained scrapes to the north face on the lower 10 feet of the tree.

Tree G - mostly uprooted and lying on the ground on a 5 degree heading and partially covered by portions of the left wing; the base of the trunk was located approx. 1 foot north of the left wing ground scar; the lower 10 feet of the trunk contained scrapes on the south side; no broken branches were observed on the north side of the tree.

Tree H - uprooted somewhat and leaning the end of the left wing ground scar; leaves had "dead" appearance but no branches were broken; tree height was approx. 25 feet.

Tree I - no damage to branches or leaves were observed; tips of branches/leaves extended to almost directly over the end of the left wing ground scar.

The clearance between unbroken leaves near the top of trees B and I was estimated to be approx. 3 feet. A large tree located approx. 47 feet west of Tree F also contained several broken branches; the heading from the end of the left wing ground scar to the edge of the broken branches was approximately 260 degrees.