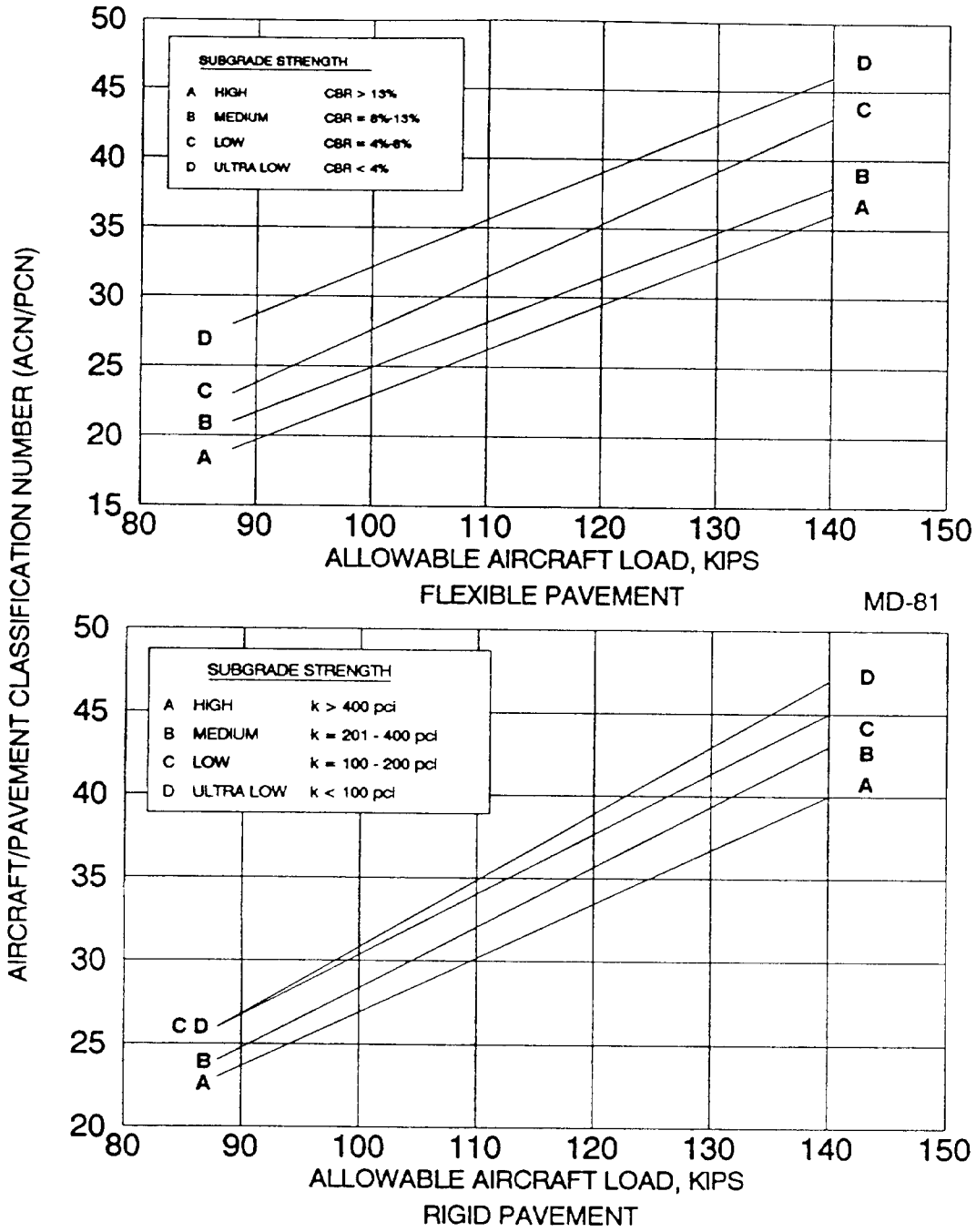

Figure A-422. McDonnell Douglas MD-81, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-217)

No. of Engines 2 Engine Rating 20,000 lb

Min. T/O Wt. 88.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 149.5 k-lb Max. T/O Wt. War-Time 149.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,400 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 125.5 k-lb Max. Ldg. Wt. 130.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,600 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,750 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
126	36	38	39	41	32	33	37	41
130	37	39	41	43	33	35	39	43
150	45	47	49	51	39	42	47	50

Figure A-423. McDonnell Douglas MD-82

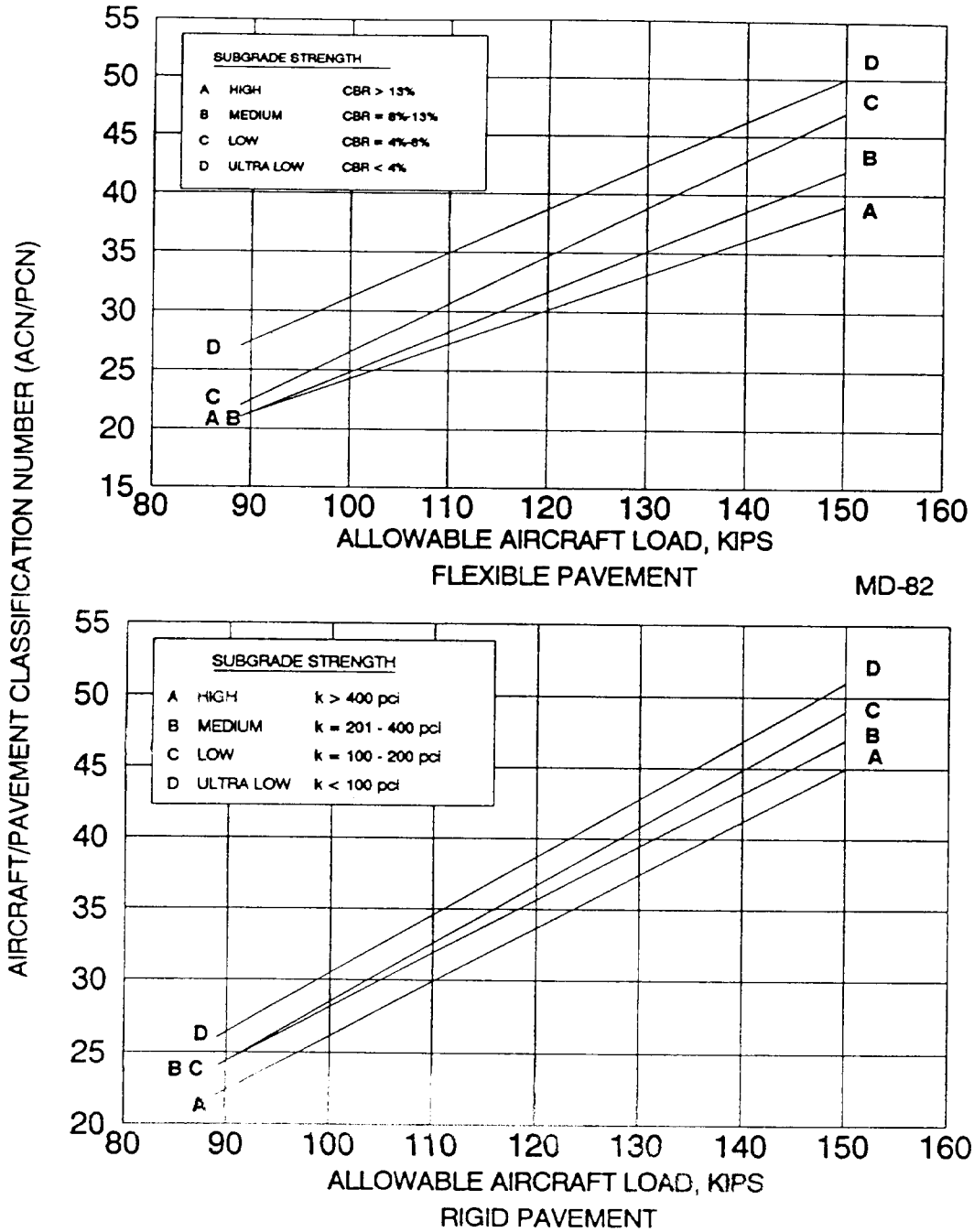

Figure A-424. McDonnell Douglas MD-82, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-219)

No. of Engines 2 Engine Rating 21,000 lb

Min. T/O Wt. 92.3 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 160.0 k-lb Max. T/O Wt. War-Time 160.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 126.2 k-lb Max. Ldg. Wt. 139.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,650 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,000 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
126	36	38	39	41	32	33	37	41
140	40	43	45	47	36	38	43	46
160	48	51	53	54	42	45	49	53

Figure A-425. McDonnell Douglas MD-83

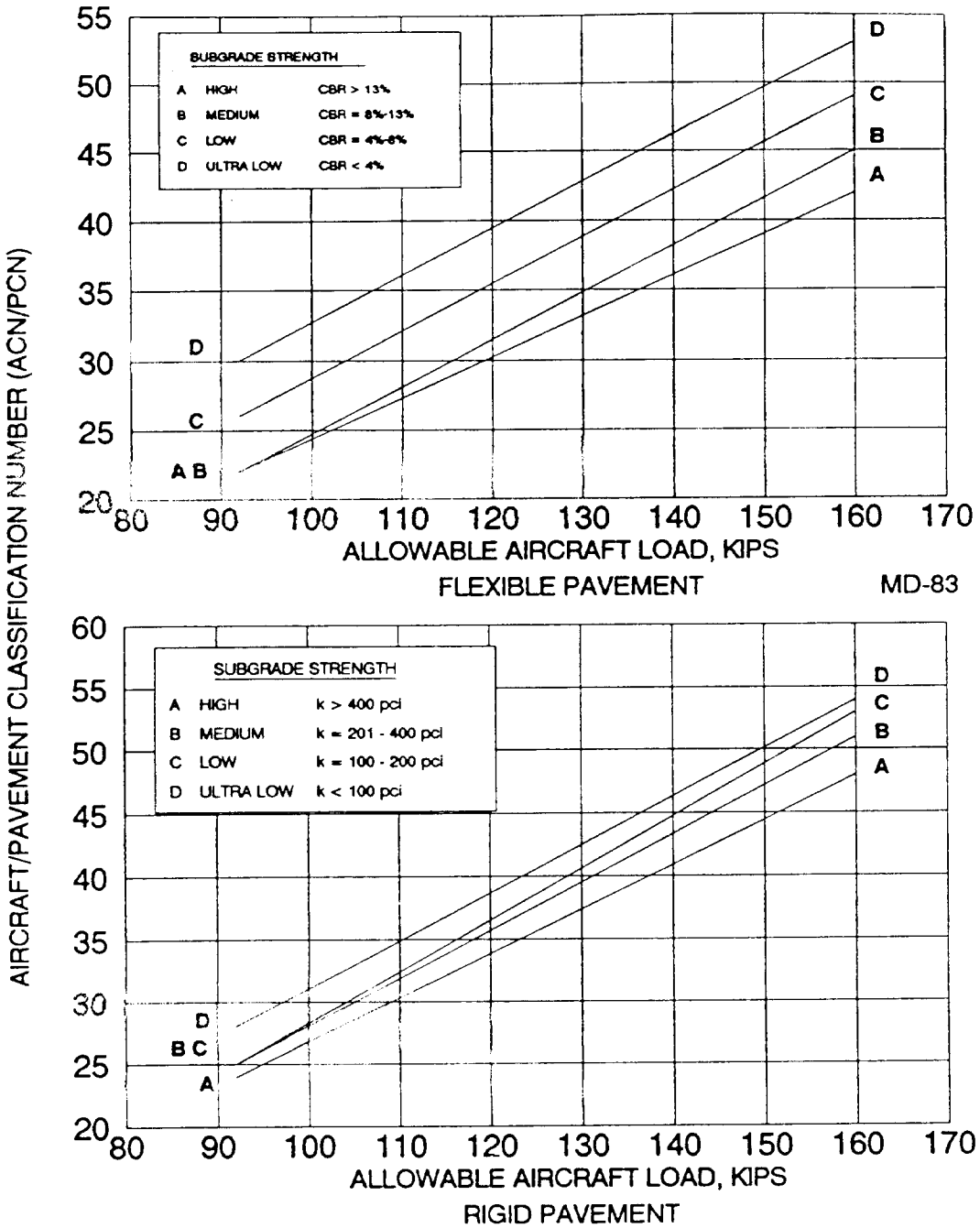

Figure A-426. McDonnell Douglas MD-83, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-217C)

No. of Engines 2 Engine Rating 20,000 lb

Min. T/O Wt. 87.4 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 149.5 k-lb Max. T/O Wt. War-Time 149.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,400 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 116.2 k-lb Max. Ldg. Wt. 130.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,400 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,800 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
116	32	34	36	37	29	30	34	38
130	37	39	41	43	33	35	39	43
150	45	47	49	51	39	42	47	50

Figure A-427. McDonnell Douglas MD-87

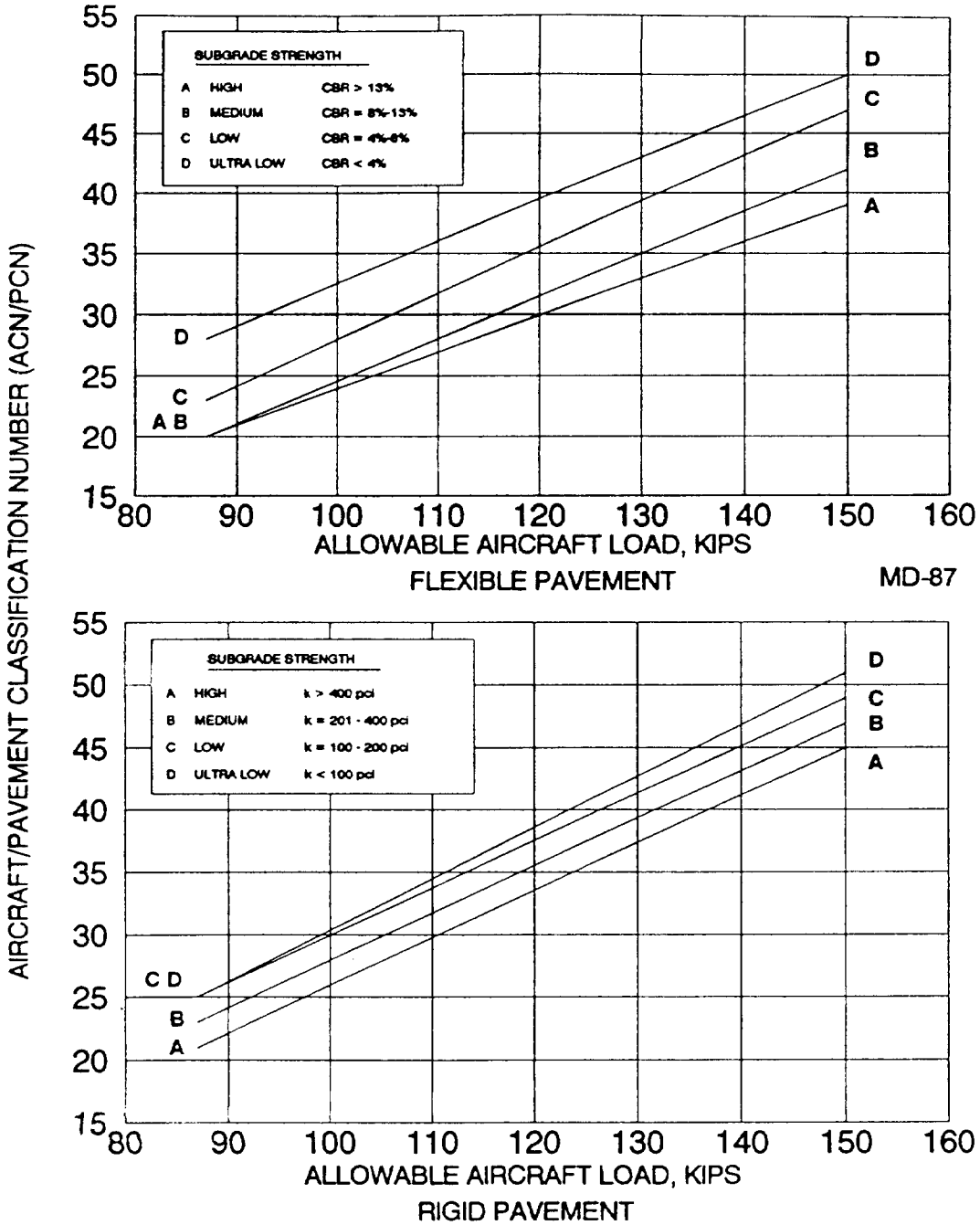

Figure A-428. McDonnell Douglas MD-87, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-217A)

No. of Engines 2 Engine Rating 20,000 lb

Min. T/O Wt. 88.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 149.5 k-lb Max. T/O Wt. War-Time 149.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,400 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 125.5 k-lb Max. Ldg. Wt. 130.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,600 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,750 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
126	36	38	39	41	32	33	37	41
130	37	39	41	43	33	35	39	43
150	45	47	49	51	39	42	47	50

Figure A-429. McDonnell Douglas MD-88

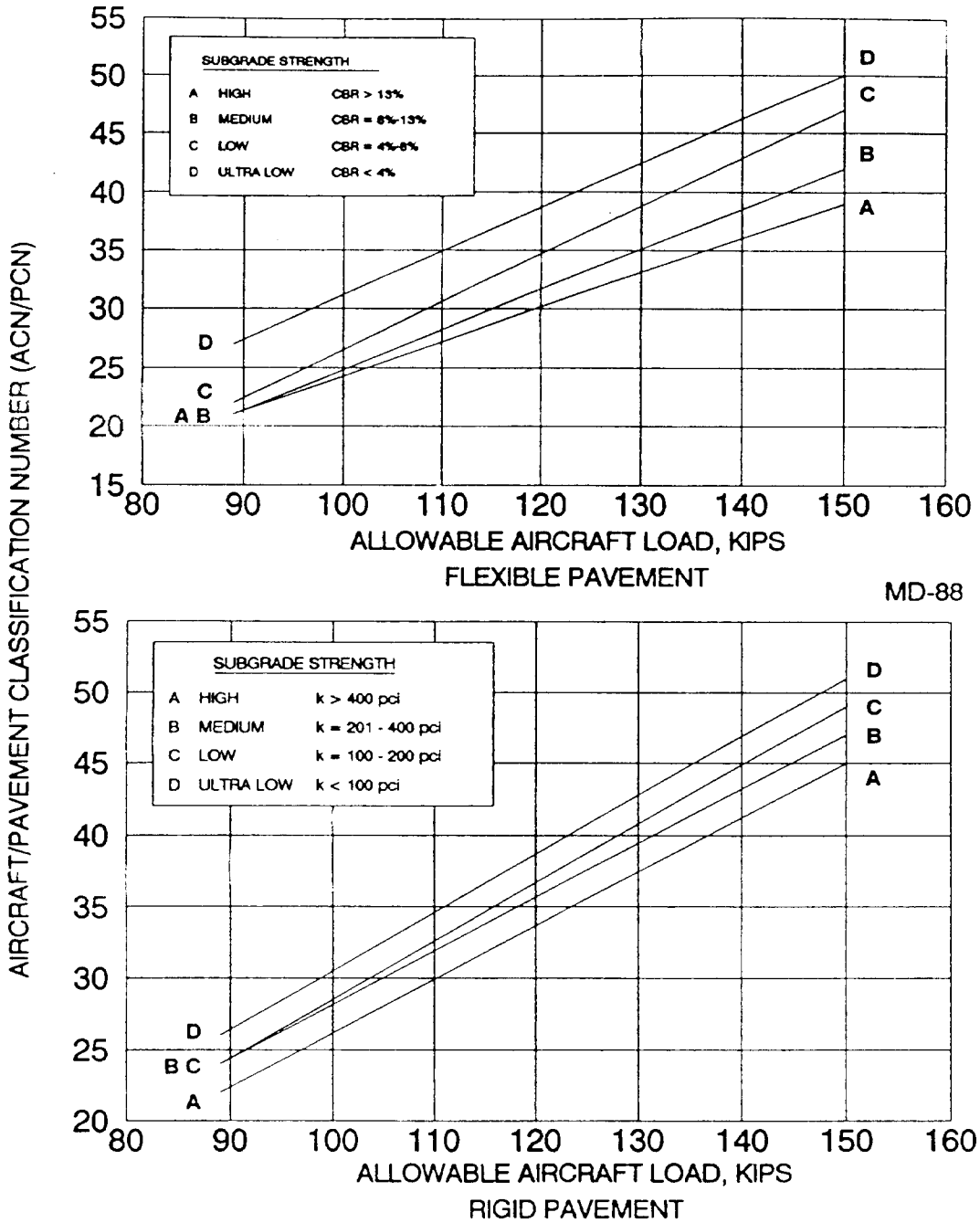

Figure A-430. McDonnell Douglas MD-88, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer General Electric (CF6-6D1)

No. of Engines 3 Engine Rating 41,000 lb

Min. T/O Wt. 291.7 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 440.0 k-lb Max. T/O Wt. War-Time 455.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,400 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 351.0 k-lb Max. Ldg. Wt. 363.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,600 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,750 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
351	35	40	48	55	40	43	50	70
364	37	42	50	58	42	45	52	73
440	46	54	64	74	53	58	68	95
455	48	56	68	78	56	60	72	100

Figure A-431. McDonnell Douglas DC-10-10

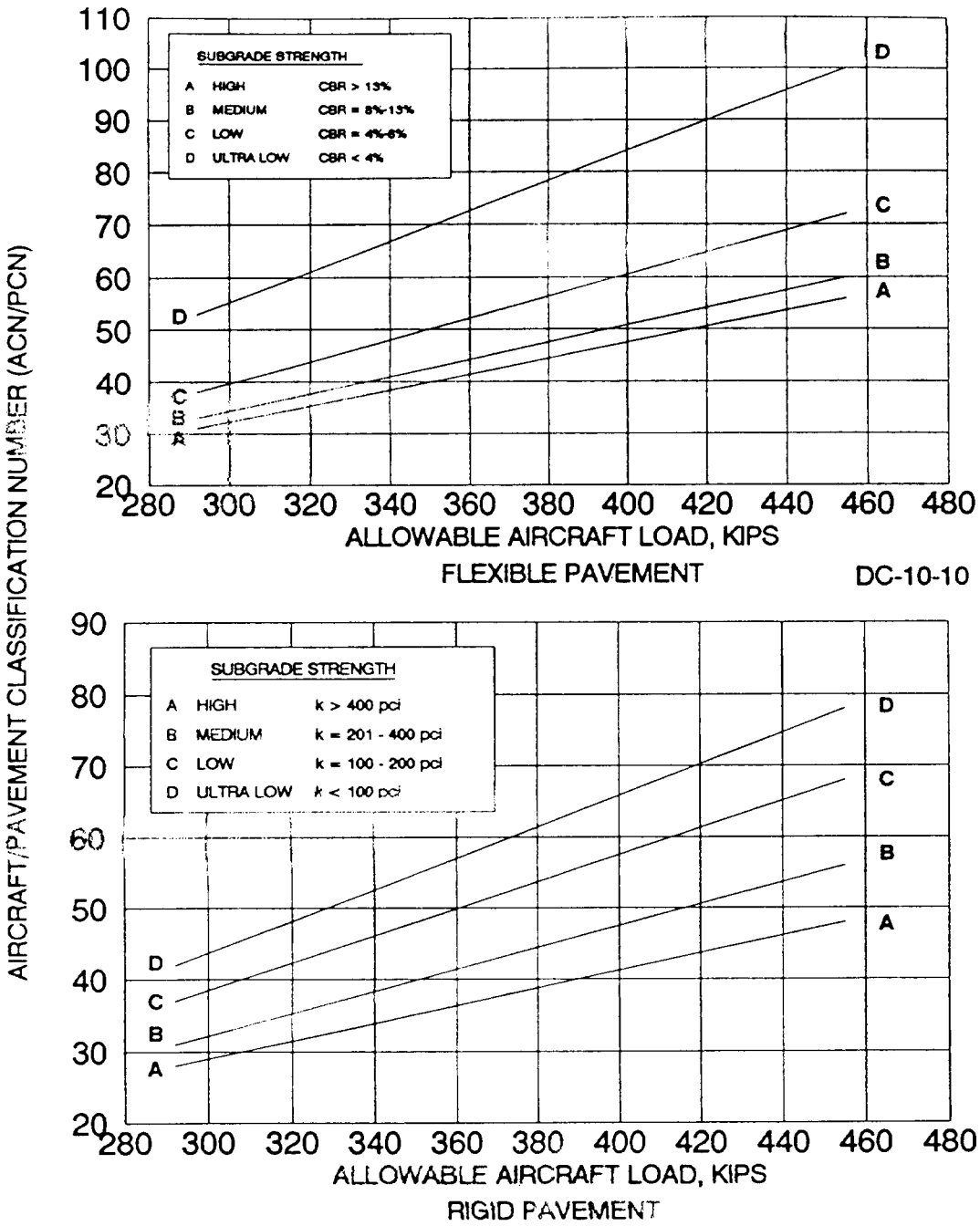

Figure A-432. McDonnell Douglas DC-10-10, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer General Electric (CF6-50C1)

No. of Engines 3 Engine Rating 51,000 lb

Min. T/O Wt. 334.7 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 555.0 k-lb Max. T/O Wt. War-Time 572.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,400 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 413.0 k-lb Max. Ldg. Wt. 421.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,050 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,200 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
413	32	36	43	50	38	40	46	64
421	32	36	44	52	38	40	47	66
555	45	53	64	75	53	58	70	97
572	46	55	66	78	55	61	74	100

Figure A-433. McDonnell Douglas DC-10-30

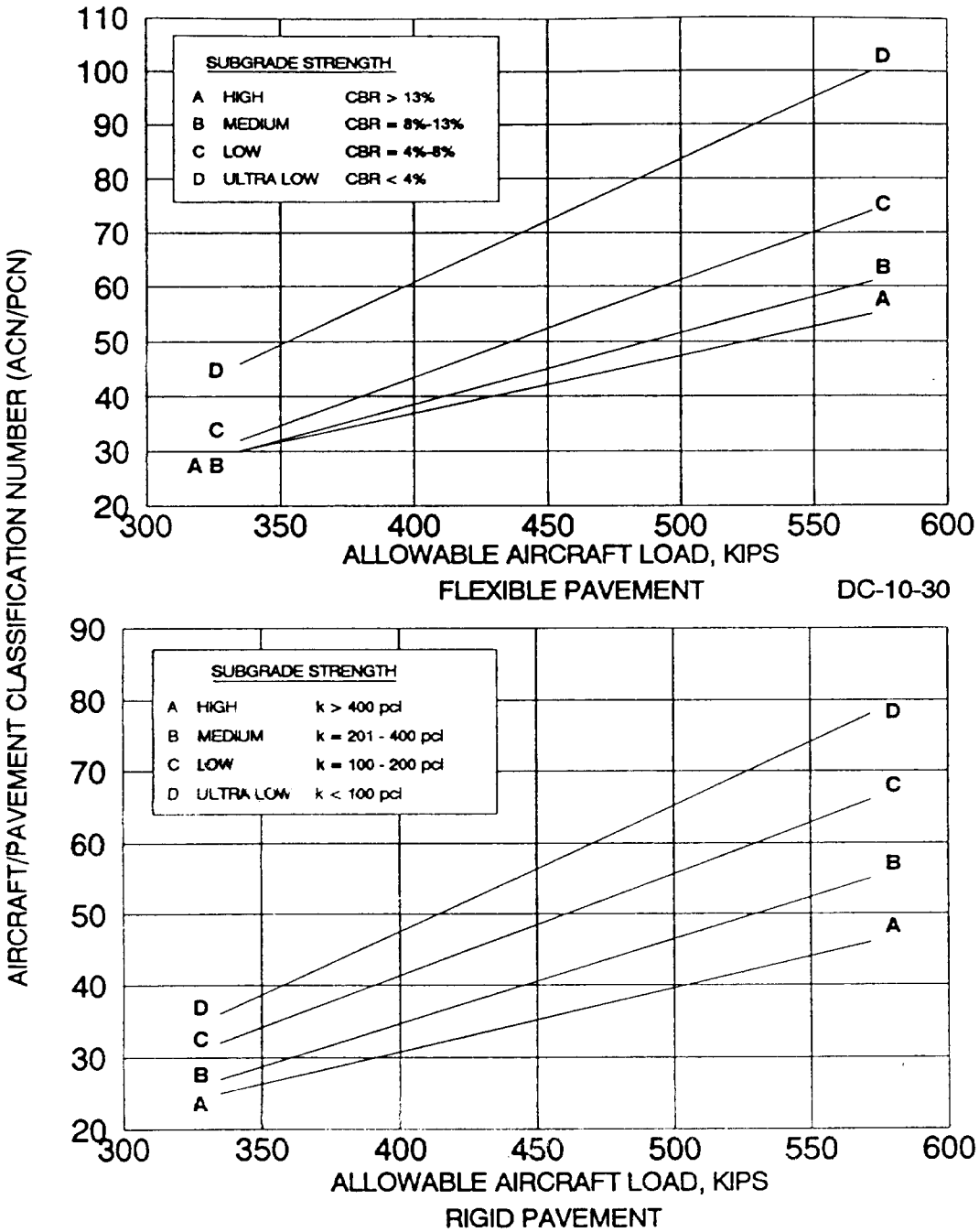

Figure A-434. McDonnell Douglas DC-10-30, ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT9D-59A)

No. of Engines 3 Engine Rating 53,000 lb

Min. T/O Wt. 338.7 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 555.0 k-lb Max. T/O Wt. War-Time 572.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,300 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 413.0 k-lb Max. Ldg. Wt. 421.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,900 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,000 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
413	32	36	43	50	38	40	46	64
421	32	36	44	52	38	40	47	66
555	45	53	64	75	53	58	70	97
572	46	55	66	78	55	61	74	100

Figure A-435. McDonnell Douglas DC-10-40

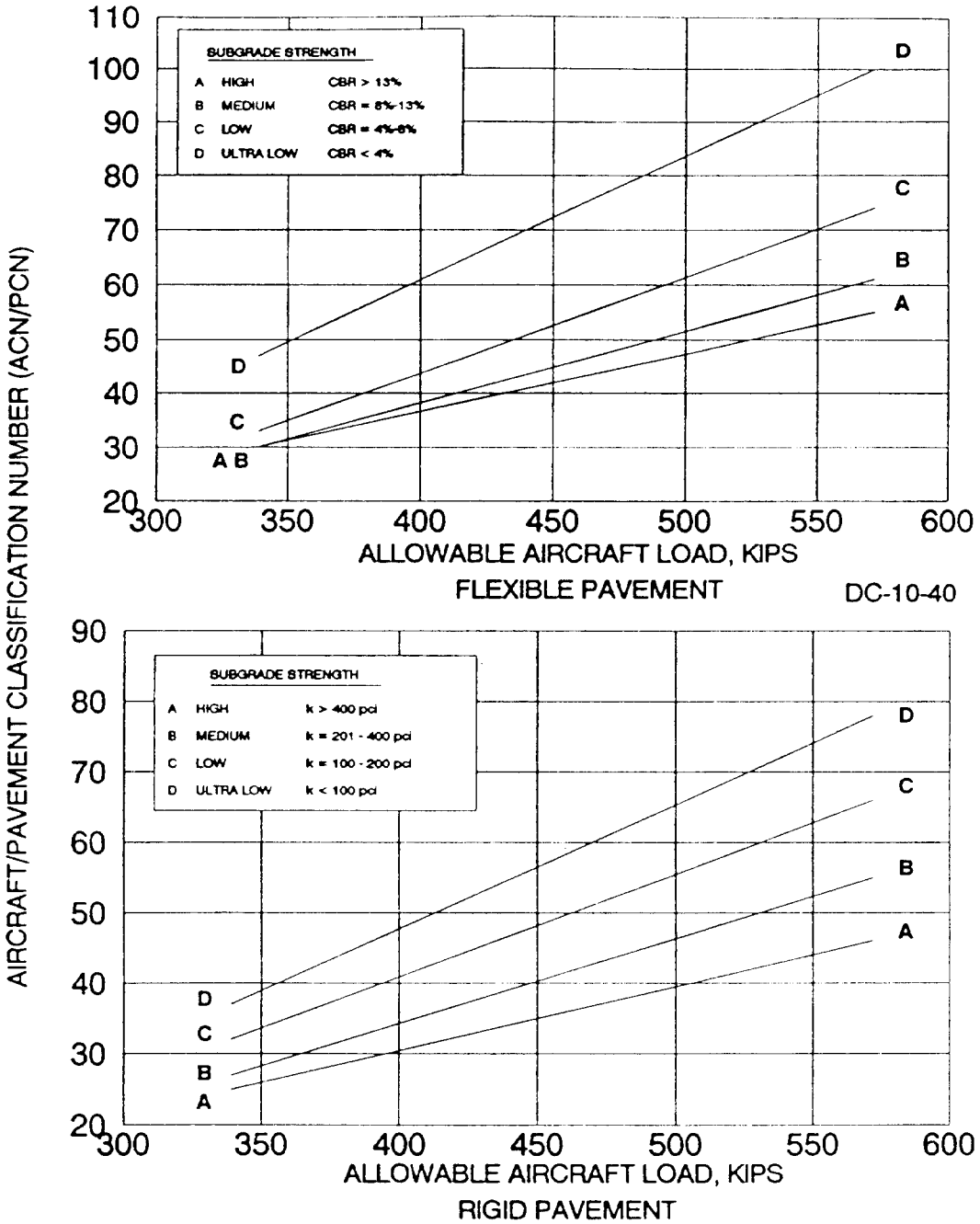

Figure A-436. McDonnell Douglas DC-10-40, ACN/PCN Curves

Aircraft Manufacturer Aerospatiale/Sud-Aviation

Aircraft Engine Manufacturer Rolls-Royce (Avon 533R)

No. of Engines 2 Engine Rating 12,600 lb

Min. T/O Wt. 72.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 110.2 k-lb Max. T/O Wt. War-Time 110.2 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,800 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 84.6 k-lb Max. Ldg. Wt. 105.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. †

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,650 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-437. Aerospatiale/Sud-Aviation SE-210, Caravelle

Aircraft Manufacturer British Aerospace

Aircraft Engine Manufacturer Rolls-Royce (Spey-2MK506)

No. of Engines 2 Engine Rating 10,410 lb

Min. T/O Wt. 53.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. 3,450 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 80.0 k-lb Max. T/O Wt. War-Time 80.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,700 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 52.5 k-lb Max. Ldg. Wt. 71.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,180 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,120 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
53	14	15	16	17	12	13	15	17
71	20	21	22	24	17	19	21	24
80	23	24	26	27	20	22	24	27

Figure A-438. B.A.C. One-Eleven Model 200

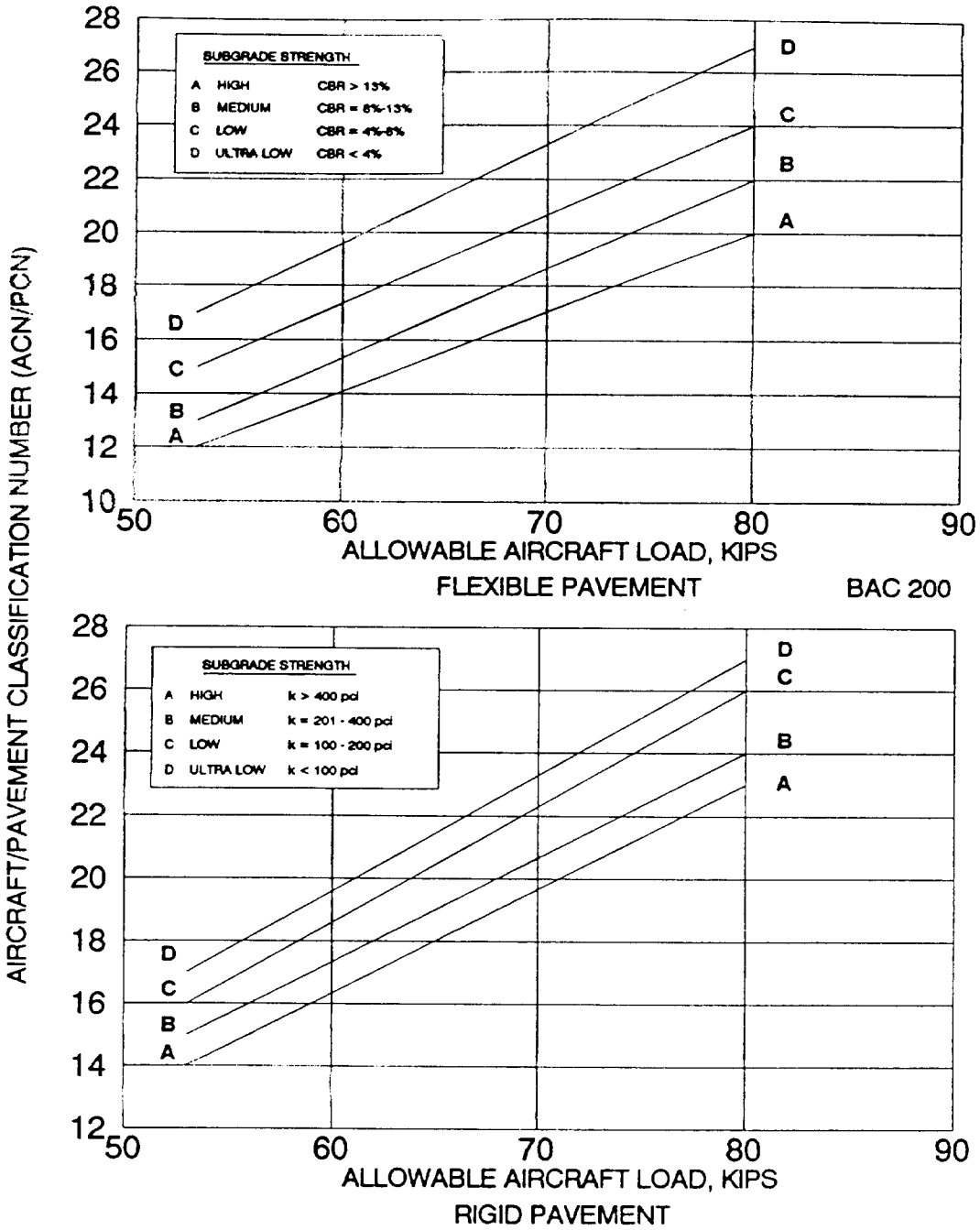

Figure A-439. B.A.C. One-Eleven Model 200, ACN/PCN Curves

Aircraft Manufacturer British Aerospace

Aircraft Engine Manufacturer Rolls-Royce (Spey MK511)

No. of Engines 2 Engine Rating 11,400 lb

Min. T/O Wt. 57.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. 3,350 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 89.5 k-lb Max. T/O Wt. War-Time 89.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,750 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 56.2 k-lb Max. Ldg. Wt. 79.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,730 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,240 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
56	17	18	19	20	13	14	16	18
79	24	26	27	28	21	22	24	26
90	28	30	31	32	24	26	28	30

Figure A-440. B.A.C. One-Eleven Model 400

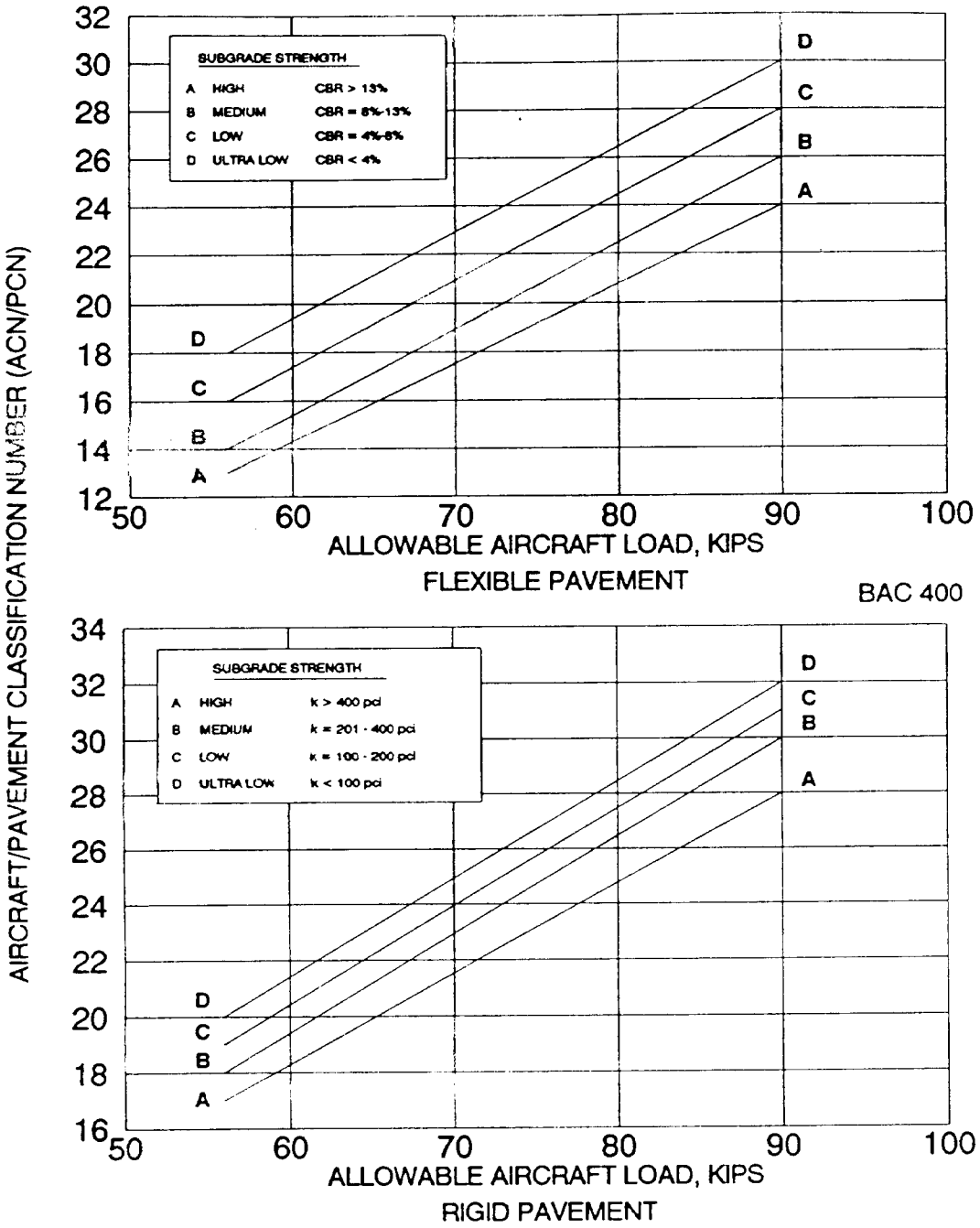

Figure A-441. B.A.C. One-Eleven Model 400, ACN/PCN Curves