

McDonnell Douglas MD-83 Performance ▯ (JT8D-219C)

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PREFACE

See MD-82 Performance Page.

POWER SETTING CHARTS

MD-83 Reserve Takeoff EPR

Based On: A/C Pack ON Airfoil Anti-Ice ON or OFF Engine Anti-Ice ON or OFF					
OAT °F	PRESSURE ALTITUDE - 1000 FEET				
	-1000	SL	1000	2000	3000 & ABOVE
50 Or Below 60	1.98	2.03	2.05	2.07	2.09
	1.98	2.03	2.05	2.07	2.08
70 80	1.98	2.03	2.05	2.05	2.07
	1.98	2.03	2.05	2.05	2.05
90 100	1.98	2.00	2.00	2.00	2.00
	1.96	1.96	1.96	1.96	1.96
110 120	1.91	1.91	1.91	1.91	1.91
	1.86	1.86	1.86	1.86	1.86
130 140	1.81	1.81	1.81	1.81	1.81
	1.75	1.75	1.75	1.75	1.75

CORRECTION: A/C Pack OFF +.025

NOTE: The EPR Correction For A/C Pack Off should not be included when manually computing T.O. EPR unless Airport Analysis requires A/C OFF.

MD-83 Reserve Takeoff N1

Based On:

A/C Pack ON

Airfoil Anti-Ice ON or OFF

Engine Anti-Ice ON or OFF

OAT °F	PRESSURE ALTITUDE - 1000 FEET				
	-1000	SL	1000	2000	3000 & Above
-40	83.8	86.5	87.7	88.8	90.0
-30	84.8	87.5	88.7	89.9	91.1
-20	85.8	88.5	89.7	90.9	92.1
-10	86.7	89.5	90.7	91.9	93.1
0	87.7	90.5	91.7	93.0	94.2
10	88.6	91.5	92.7	94.0	95.2
20	89.6	92.5	93.7	95.0	96.2
30	90.5	93.4	94.7	95.9	97.2
40	91.4	94.4	95.6	96.9	98.2
50	92.3	95.3	96.6	97.9	99.2
60	93.3	96.3	97.6	98.9	99.6
70	94.1	97.2	98.5	98.5	99.8
80	95.0	98.1	99.4	99.4	99.4
90	95.9	97.0	97.0	97.0	97.0
100	95.7	95.7	95.7	95.7	95.7
110	93.8	93.8	93.8	93.8	93.8
120	92.8	92.8	92.8	92.8	92.8
122	92.6	92.6	92.6	92.6	92.6

CORRECTION: A/C Pack OFF +.9%

NOTE: The N1 Correction For A/C Pack Off should not be included when manually computing T.O. N1 unless Airport Analysis requires A/C OFF.

MD-83 Max Takeoff EPR

Based On:

A/C Pack ON

Airfoil Anti-Ice ON or OFF

Engine Anti-Ice ON or OFF

OAT °F	PRESSURE ALTITUDE - 1000 FEET				
	-1000	SL	1000	2000	3000 & Above
50 Or Below 60	1.93	1.99	2.01	2.03	2.06
	1.93	1.99	2.01	2.03	2.05
70 80	1.93	1.99	2.01	2.03	2.04
	1.93	1.99	2.01	2.01	2.01
90 100	1.93	1.95	1.95	1.95	1.95
	1.90	1.90	1.90	1.90	1.90
110 120	1.85	1.85	1.85	1.85	1.85
	1.79	1.79	1.79	1.79	1.79
130 140	1.74	1.74	1.74	1.74	1.74
	1.69	1.69	1.69	1.69	1.69

CORRECTION: A/C Pack OFF +.025

NOTE: The EPR Correction For A/C Pack Off should not be included when manually computing T.O. EPR unless Airport Analysis requires A/C OFF.

MD-83 Max Takeoff N1

Based On:

A/C Pack ON

Airfoil Anti-Ice ON or OFF

Engine Anti-Ice ON or OFF

OAT °F	PRESSURE ALTITUDE - 1000 FEET				
	-1000	SL	1000	2000	3000 & Above
-40	81.5	84.3	85.3	86.5	88.2
-30	82.4	85.3	86.3	87.5	89.3
-20	83.4	86.2	87.3	88.5	90.3
-10	84.3	87.2	88.3	89.5	91.3
0	85.2	88.2	89.3	90.5	92.3
10	86.2	89.1	90.3	91.5	93.3
20	87.1	90.1	91.2	92.5	94.3
30	88.0	91.0	92.2	93.4	95.3
40	88.8	91.9	93.1	94.4	96.3
50	89.8	92.9	94.0	95.3	97.2
60	90.6	93.8	94.9	96.2	97.5
70	91.5	94.7	95.8	97.2	97.8
80	92.4	95.5	96.7	96.7	96.7
90	93.2	94.3	94.3	94.3	94.3
100	92.4	92.4	92.4	92.4	92.4
110	91.6	91.6	91.6	91.6	91.6
120	90.4	90.4	90.4	90.4	90.4
122	90.2	90.2	90.2	90.2	90.2

CORRECTION: A/C Pack OFF +.9%

NOTE: The N1 Correction For A/C Pack Off should not be included when manually computing T.O. N1 unless Airport Analysis requires A/C OFF.

MD-83 Max Climb EPR

Based On:

A/C Pack ON

Engine and Airfoil A/I OFF

PRESS ALT FEET	RAT °C							
	-20 AND BELOW	-10	0	+10	+20	+30	+40	+50
SL	2.01	2.02	1.98	1.90	1.82	1.79	1.77	1.65
1000	2.04	2.04	1.98	1.90	1.82	1.80	1.77	1.65
2000	2.06	2.06	1.98	1.90	1.82	1.81	1.77	1.65
3000	2.08	2.06	1.98	1.90	1.82	1.82	1.77	1.65
4000	2.07	2.06	1.98	1.90	1.83	1.83	1.77	1.65
5000	2.07	2.06	1.98	1.90	1.84	1.85	1.77	1.65
10000	2.07	2.06	1.98	1.90	1.88	1.86	1.77	1.65
15000	2.07	2.06	1.98	1.94	1.94	1.86	1.77	1.65
20000	2.07	2.05	2.02	2.03	1.93	1.85	-	-
25000	2.07	2.04	2.04	2.04	1.92	1.85	-	-
30000 AND ABOVE	2.07	2.07	2.04	-	-	-	-	-

CORRECTIONS:

A/C Pack OFF Below 1000 Feet +.02

Anti-Ice, Engine -.08

Anti-Ice, Airfoil, 2 Engines Operating -.02

Anti-Ice, Airfoil, 1 Engine Operating -.04

MD-83 Max Cruise EPR

Based On:

A/C Pack ON

Engine and Airfoil A/I OFF

PRESS ALT FEET	RAT °C							
	-30 AND BELOW	-20	-10	0	+10	+20	+30	+40
5000	2.06	2.00	1.93	1.86	1.80	1.71	1.61	1.51
10000	2.06	2.00	1.93	1.86	1.80	1.71	1.61	1.51
20000	2.04	1.98	1.91	1.84	1.78	1.69	1.59	1.49
23000	2.03	1.97	1.90	1.83	1.77	1.68	1.58	1.48
25000	2.03	1.97	1.90	1.83	1.77	1.68	1.58	1.48
27000	2.05	1.99	1.92	1.85	1.79	1.70	1.60	1.50
29000	2.07	2.01	1.94	1.87	1.81	1.72	1.62	1.52
31000	2.07	2.01	1.94	1.87	1.81	1.72	1.62	1.52
33000	2.07	2.01	1.94	1.87	1.81	1.72	1.62	1.52
35000	2.06	2.01	1.93	1.86	1.80	1.71	1.61	1.51
37000	2.06	2.01	1.93	1.86	1.80	1.71	1.61	1.51

CORRECTIONS:

A/C Pack OFF:

PRESS ALT	
5000	+.02
10000	+.02
20000	+.04
23000	+.05
25000	+.05
27000	+.03
29000	+.01
31000	+.01
33000	+.01
35000	+.02
37000	+.02

Airfoil A/I ON:

Below 15000	-.02
Above 15000	-.03

Engine A/I ON: All Altitudes -.08

'MD-83 Go-Around EPR

Based On:

Both A/C Packs On
Eng Anti-Ice ON or OFF

AIRPORT PRESS ALT - FT	REPORTED GROUND TEMP °F							
	60 AND BELOW	70	80	90	100	110	120	122
-1000	1.97	1.97	1.97	1.97	1.96	1.92	1.87	1.86
SL	2.02	2.02	2.02	2.01				
1000	2.04	2.04	2.04					
2000	2.06	2.06	2.06					
3000 & Above	2.09	2.08	2.06					

CORRECTIONS:

1 Pack Only ON +.02

Airfoil Anti-Ice ON, 2 Engines Operating -.02

Airfoil Anti-Ice ON, 1 Engine Operating -.04

TAKEOFF CHARTS

MD-83 V1 - VR - V2 - Departure Speeds, Flaps 4 and 11

	PRESS ALT 1000 FT	TEMPERATURE °F																	
	7 to 8 6 to 7										76 or less		76 or less 77 to 85		77 to 85 86 to 94				
	5 to 6 4 to 5							67 or less 85 or less		68 to 85 86 to 94		86 to 94 95 to 103		95 to 103 104 to 122					
	3 to 4 2 to 3		76 or less		76 or less 77 to 85		77 to 85 86 to 94		86 to 94 95 to 103		95 to 103 104 to 122								
	1 to 2 -1 to 1		85 or less 94 or less		86 to 94 95 to 103		95 to 112 104 to 112		113 to 122 113 to 122										
	TOGW 1000 LBS	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2
FLAPS 4	90	111	124	134	112	121	130	113	122	130	115	123	130	116	123	130	117	124	130
	100	119	128	138	120	129	138	122	130	138	123	131	138	125	131	138	126	132	138
	110	127	136	145	129	137	145	130	138	145	132	138	145	133	139	145	134	140	145
	120	135	143	152	137	145	152	138	146	152	140	146	152	141	147	152	142	147	152
	130	143	150	158	145	151	158	146	152	158	147	152	158	148	153	158	150	154	158
FLAPS 11	140	150	156	164	152	157	164	153	158	164	154	159	164	155	159	164	157	160	164
	150	157	163	170	159	164	170	160	165	170	161	165	170	163	166	170	164	166	170
	160	164	169	176	166	170	176	167	170	176	169	171	176	170	171	176	172	172	176
	170	170	174	182	172	175	182	174	176	182	176	176	182	177	177	182	177	177	182
	180	177	181	189	179	182	189	179	182	189	181	184	191	182	185	191	183	186	191
FLAPS 11	90	101	122	132	103	119	128	104	117	125	105	114	122	106	113	120	107	114	120
	100	109	122	132	110	119	128	112	119	127	113	120	127	114	120	127	115	121	127
	110	117	124	133	118	125	133	119	126	133	120	126	133	121	127	133	122	128	133
	120	123	131	139	125	132	139	126	133	139	128	133	139	129	134	139	130	134	139
	130	130	137	145	132	138	145	133	138	145	134	139	145	136	139	145	137	140	145
FLAPS 11	140	137	142	150	139	143	150	140	144	150	141	145	150	142	145	150	143	146	150
	150	143	148	156	145	149	156	146	150	156	148	150	156	149	151	156	150	151	156
	160	150	152	162	152	153	162	153	154	162	154	155	162	155	155	162	156	156	162
	170	155	158	167	157	159	167	159	160	167	161	161	167	162	162	167	162	162	167
	180	162	165	174	164	166	174	166	167	174	168	168	174	169	169	174	170	170	174

Note: V1, Vr and V2 values that are in red, after applying correction factors that follow, must be compared to the minimum V1/Vmcg, Vr and V2 tables below.

V1 Slope Correction

+2.5 kt each 1% upslope

-2.0 kt each 1% downslope

Departure Speeds

	GROSS WEIGHT - 1000 POUNDS							
	90	100	110	120	130	140	150	160
0 / EXT FLAP RET.	V2 + 5							
0 / RET SLAT RET.	157	165	173	181	188	195	202	209
0 / RET MIN. MAN.	194	205	215	225	234	243	251	260

Target Pitch Attitudes

TOGW 1000 LBS	FLAPS	
	4	11
	PITCH ATTITUDE - °	
100	24	23
120	22	21
140	19	19
160	17	17

Target Pitch Attitudes are approximate sea level reference in degrees for V2 + 10 climb and will decrease slightly at higher elevations.

MD-83 V1 - VR - V2 - Departure Speeds, Flaps 17 and 24

	PRESS ALT 1000 FT	TEMPERATURE °F																	
	7 to 8 6 to 7										79 or less			81 or less 80 to 92			82 to 95 93 to 104		
	5 to 6 4 to 5				66 or less			76 or less 67 to 86			77 to 90 87 to 97			91 to 100 98 to 108			101 to 110 109 to 113		
	3 to 4 2 to 3	76 or less			83 or less 77 to 92			84 to 95 93 to 104			96 to 106 105 to 113			107 to 117 114 to 122					
	1 to 2 -1 to 1	86 or less 95 or less			87 to 100 96 to 108			101 to 112 109 to 118			113 to 122 119 to 122								
	TOGW 1000 LBS	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2	V1	VR	V2
FLAPS 17	90	97	119	130	98	117	127	99	114	123	101	112	121	102	109	117	103	109	116
	100	105	119	129	106	117	126	108	114	122	109	114	122	110	115	122	111	116	122
	110	112	119	128	113	120	128	114	120	128	116	121	128	117	121	128	118	122	128
	120	119	125	134	120	126	134	121	126	134	123	127	134	124	128	134	126	128	134
	130	125	131	139	127	131	139	128	132	139	130	133	139	131	133	139	133	134	139
FLAPS 24	140	132	136	145	134	137	145	136	137	145	138	138	145	138	138	145	139	139	145
	150	138	142	149	141	142	149	143	143	149	143	143	149	144	144	149	144	144	149
	160	146	147	154	147	147	154	148	148	154	148	148	154	149	149	154	149	149	154
	90	93	118	126	94	115	124	96	112	120	97	109	117	98	107	117	99	104	114
	100	100	118	127	102	115	123	103	112	119	104	112	116	105	111	116	106	110	116
FLAPS 24	110	108	118	127	109	115	123	111	115	122	111	115	122	112	116	122	114	117	122
	120	114	119	128	115	120	128	117	121	128	118	121	128	119	122	128	121	122	128
	130	121	124	133	122	124	133	124	125	133	126	126	133	127	127	133	128	128	133
	140	127	130	138	129	131	138	131	131	138	132	132	138	132	132	138	133	133	138
	150	134	135	143	136	136	143	136	136	143	137	137	143	137	137	143	138	138	143
	160	140	140	147	140	140	147	141	141	147	141	141	147	142	142	147	142	142	147

Note: V1, Vr and V2 values that are in red, after applying correction factors that follow, must be compared to the minimum V1/Vm_{CG}, Vr and V2 tables below.

V1 Slope Correction

+2.5 kt each 1% upslope

-2.0 kt each 1% downslope

Departure Speeds

	GROSS WEIGHT - 1000 POUNDS							
	90	100	110	120	130	140	150	160
0 / EXT FLAP RET.	V2 + 15							
0 / RET SLAT RET.	157	165	173	181	188	195	202	209
0 / RET MIN. MAN.	194	205	215	225	234	243	251	260

Target Pitch Attitudes

TOGW 1000 LBS	FLAPS 17 AND 24
	PITCH ATTITUDE - °
100	22
120	20
140	18
160	16

Target Pitch Attitudes are approximate sea level reference in degrees for V2 + 10 climb and will decrease slightly at higher elevations.

MD-83 Minimum V1/Vmcg - Vr - V2

MINIMUM V1/Vmcg					
OAT °F	PRESSURE ALTITUDE				
	-1000 TO S.L.	2000	4000	6000	8000
-40 TO 65	119	116	112	108	104
70	119	116	112	108	104
80	119	115	111	107	103
90	118	113	109	105	101
100	115	111	107	103	99
110	113	109	105	101	-
120	111	107	-	-	-
122	110	106	-	-	-
MINIMUM Vr					
OAT °F	PRESSURE ALTITUDE				
	-1000 TO S.L.	2000	4000	6000	8000
-40 TO 65	124	121	118	114	110
70	124	121	118	114	110
80	124	120	117	113	109
90	122	119	115	111	107
100	121	117	113	109	105
110	118	115	111	107	-
120	116	112	-	-	-
122	116	112	-	-	-
MINIMUM V2					
OAT °F	PRESSURE ALTITUDE				
	-1000 TO S.L.	2000	4000	6000	8000
-40 TO 65	133	130	127	122	118
70	133	130	126	122	118
80	133	129	125	121	116
90	132	128	123	119	114
100	130	125	121	117	112
110	127	123	119	114	-
120	125	120	-	-	-
122	124	120	-	-	-

Manually calculated V1, Vr and V2 speeds that are depicted in red must be compared to their minimum value using the following steps:

1. Compare calculated V1 with Minimum V1/Vmcg.
Use the greater value as V1.
2. Compare calculated Vr with Minimum Vr.
Use the greater value as Vr.
3. Increase calculated V2 by the same amount as Vr was increased in step 2, then compare adjusted V2 to Minimum V2.
Use the greater value as V2.

Note: Minimum V1/Vmcg - Vr - V2 Departure Speeds are applicable for all flap settings.

MD-83 320 Knot Cruise

BASED ON: 250 KIAS to 10,000 feet / 320 KIAS above 10,000 feet																				
PRESS ALT 1000 FT.	STD DAY TAS	IAS KTS	STD TEMP °C	GROSS WEIGHT - 1000 LBS.																
				156	152	148	144	140	136	132	128	124	120	116	112	108	104	100	96	92
25	458	320	-34	1.71 54.5	1.70 55.2	1.69 55.8	1.68 56.4	1.67 57.1	1.66 57.9	1.65 58.6	1.64 59.3	1.63 59.9	1.62 60.6	1.62 61.3	1.61 61.8	1.60 62.4	1.59 63.1	1.59 63.7	1.58 64.3	1.57 65.5
23	445	320	-31	1.65 53.5	1.64 54.2	1.63 54.8	1.62 55.5	1.61 56.2	1.60 56.8	1.60 57.4	1.59 58.0	1.58 58.7	1.57 59.3	1.57 59.9	1.56 60.6	1.55 61.2	1.55 61.7	1.54 62.3	1.54 62.8	1.53 63.4
21	432	320	-27	1.60 51.9	1.59 52.5	1.58 53.2	1.57 53.8	1.56 54.5	1.55 55.1	1.55 55.8	1.54 56.4	1.54 56.9	1.53 57.5	1.53 58.1	1.52 58.7	1.51 59.2	1.51 59.8	1.50 60.4	1.50 60.9	1.49 61.3
19	419	320	-23	1.56 50.4	1.55 51.1	1.54 51.6	1.53 52.2	1.53 52.8	1.52 53.4	1.51 54.1	1.51 54.7	1.50 55.2	1.49 55.7	1.49 56.1	1.48 56.5	1.48 56.9	1.47 57.3	1.47 57.8	1.46 58.2	1.45 59.0
17	407	320	-19	1.52 49.1	1.51 49.7	1.50 50.2	1.49 50.7	1.49 51.2	1.48 51.6	1.48 51.9	1.47 52.4	1.46 52.8	1.46 53.3	1.45 52.7	1.45 54.1	1.44 54.5	1.44 55.0	1.43 55.2	1.43 55.8	1.42 56.5
15	395	320	-15	1.47 47.2	1.47 47.7	1.46 48.2	1.45 48.6	1.45 49.0	1.44 49.4	1.44 49.9	1.43 50.3	1.43 50.7	1.43 51.1	1.42 51.5	1.42 51.8	1.41 52.2	1.41 52.6	1.40 53.0	1.40 53.4	1.39 54.3
13	384	320	-11	1.44 45.4	1.44 45.8	1.43 46.2	1.42 46.6	1.42 47.0	1.41 47.4	1.41 47.8	1.40 48.2	1.40 48.6	1.39 49.0	1.39 49.4	1.38 49.8	1.38 50.2	1.38 50.6	1.37 51.0	1.37 51.4	1.36 52.1
11	373	320	-7	1.41 43.5	1.40 43.9	1.39 44.3	1.39 44.8	1.38 45.2	1.38 45.8	1.37 46.0	1.37 46.4	1.37 46.7	1.36 47.1	1.36 47.5	1.36 47.9	1.35 48.2	1.35 48.6	1.34 49.0	1.34 49.4	1.33 49.9
9	285	250	-3	1.33 40.5	1.32 41.2	1.31 41.8	1.31 42.5	1.30 43.2	1.29 44.0	1.28 44.7	1.28 45.5	1.27 46.2	1.26 46.9	1.26 47.7	1.25 48.4	1.25 49.2	1.24 49.9	1.23 50.6	1.23 51.4	1.22 52.7
7	276	250	1	1.30 38.7	1.30 39.4	1.29 40.1	1.28 40.7	1.27 41.4	1.27 42.0	1.26 42.7	1.26 43.4	1.25 44.1	1.24 44.8	1.24 45.5	1.23 46.2	1.23 46.8	1.22 47.5	1.22 48.1	1.21 48.8	1.20 50.1
5	268	250	5	1.28 37.0	1.27 37.6	1.27 38.2	1.26 38.9	1.25 39.5	1.25 40.2	1.24 40.8	1.24 41.4	1.23 42.0	1.22 42.6	1.22 43.3	1.21 43.9	1.21 44.5	1.20 45.2	1.20 45.8	1.20 46.5	1.19 47.6

EPR REQUIRED
SPECIFIC RANGE (NM/1000 LB)

TO OBTAIN TOTAL FUEL FLOW:
Total Fuel Flow = TAS ÷ Specific Range x 1000

Correct STD TAS for deviation from standard temperature before computing total fuel flow. To correct table STD DAY TAS for temperature deviation from standard, add 1 kt per °C above standard or subtract 1 kt per °C below standard.

MD-83 Mach .76 Cruise

PRESS AL 1000 FT	STD TAS KTS	IAS KTS	STD RAT °C	GROSS WEIGHT - 1000 POUNDS																	
				156	152	148	144	140	136	132	128	124	120	116	112	108	104	100	96	92	
37	436	245	-33	-	-	-	-	-	-	-	-	1.92 74.6	1.88 77.5	1.85 80.2	1.82 82.6	1.80 84.9	1.78 87.1	1.75 89.1	1.73 91.1	1.72 93.0	1.70 95.0
35	438	257	-30	-	-	-	-	-	1.91 68.3	1.88 70.8	1.98 72.9	1.83 75.0	1.81 76.7	1.76 78.6	1.76 80.3	1.74 82.0	1.73 83.6	1.71 85.2	1.69 86.9	1.68 88.4	1.66 90.2
33	442	269	-26	-	1.93 60.9	1.90 63.1	1.87 65.0	1.85 66.8	1.83 68.4	1.81 69.9	1.79 71.5	1.77 72.8	1.75 74.2	1.73 75.6	1.72 77.0	1.70 78.2	1.69 79.6	1.68 81.0	1.66 82.5	1.65 83.8	1.64 85.2
31	446	281	-21	1.86 60.1	1.84 61.5	1.82 62.8	1.80 64.1	1.78 65.4	1.77 66.6	1.75 67.6	1.74 68.8	1.72 69.9	1.71 71.1	1.69 72.2	1.68 73.2	1.67 74.4	1.66 75.6	1.64 76.8	1.63 77.9	1.62 79.1	1.61 80.2
29	450	294	-17	1.79 59.1	1.78 60.1	1.76 61.1	1.75 62.1	1.73 62.9	1.72 63.9	1.71 64.8	1.70 65.7	1.69 66.7	1.67 67.6	1.66 68.6	1.65 69.6	1.64 70.6	1.63 71.6	1.62 72.5	1.61 73.4	1.60 74.3	1.59 75.2
27	454	306	-13	1.74 57.1	1.73 57.8	1.72 58.6	1.71 59.4	1.70 60.2	1.69 60.9	1.68 61.8	1.67 62.5	1.65 63.4	1.64 64.2	1.64 65.0	1.63 65.9	1.62 66.7	1.61 67.4	1.60 68.1	1.59 68.9	1.59 69.6	1.58 70.3

EPR REQUIRED

SPECIFIC RANGE (NM/1000 LB)

TO OBTAIN TOTAL FUEL FLOW:

Total Fuel Flow = TAS ÷ Specific Range x 1000

Correct STD TAS for deviation from standard temperature before computing total fuel flow. To correct table STD DAY TAS for temperature deviation from standard, add 1 kt per °C above standard or subtract 1 kt per °C below standard.

MD-83 Mach .78 Cruise

PRESS AL 1000 FT	STD TAS KTS	IAS KTS	STD RAT °C	GROSS WEIGHT - 1000 POUNDS																	
				156	152	148	144	140	136	132	128	124	120	116	112	108	104	100	96	92	
37	447	253	-31	-	-	-	-	-	-	-	-	1.96 70.5	1.93 73.1	1.91 75.7	1.88 78.1	1.85 80.4	1.83 82.6	1.80 85.1	1.78 86.7	1.76 88.9	1.74 90.9
35	450	264	-29	-	-	-	-	-	1.96 64.5	1.93 66.8	1.91 68.8	1.88 70.9	1.86 72.7	1.83 74.6	1.81 76.6	1.79 78.3	1.77 79.9	1.75 81.5	1.74 83.1	1.72 84.6	1.70 86.3
33	454	277	-24	-	1.98 57.6	1.95 58.5	1.92 61.4	1.90 63.0	1.88 64.7	1.86 66.3	1.84 67.7	1.81 69.5	1.80 71.0	1.78 72.3	1.76 73.5	1.74 74.9	1.73 76.3	1.71 77.5	1.70 78.8	1.68 80.3	1.67 81.7
31	458	289	-20	1.94 56.8	1.89 58.1	1.87 59.4	1.85 60.8	1.83 62.1	1.81 63.4	1.80 64.7	1.78 65.8	1.77 66.9	1.75 67.9	1.74 69.1	1.72 70.2	1.71 71.3	1.69 72.4	1.68 73.5	1.67 74.7	1.66 75.8	1.65 76.9
29	462	302	-16	1.84 56.0	1.83 57.1	1.81 58.2	1.79 59.2	1.78 60.2	1.77 61.1	1.75 62.0	1.74 62.9	1.72 63.8	1.71 64.7	1.70 65.6	1.69 66.7	1.68 67.5	1.67 68.5	1.66 69.4	1.65 70.3	1.64 71.2	1.63 72.0
27	466	315	-11	1.79 54.5	1.78 55.3	1.76 56.0	1.75 56.8	1.74 57.5	1.73 58.3	1.71 59.1	1.70 59.9	1.69 60.7	1.68 61.5	1.67 62.3	1.66 63.0	1.65 63.8	1.64 64.5	1.64 65.2	1.63 65.9	1.62 66.6	1.61 67.3

EPR REQUIRED

SPECIFIC RANGE (NM/1000 LB)

TO OBTAIN TOTAL FUEL FLOW:

Total Fuel Flow = TAS ÷ Specific Range x 1000

Correct STD TAS for deviation from standard temperature before computing total fuel flow. To correct table STD DAY TAS for temperature deviation from standard, add 1 kt per °C above standard or subtract 1 kt per °C below standard.

MD-83 Holding Speeds and Fuel Flow

Holding speeds vary with gross weight and altitude as given in the following chart. These speeds provide the minimum practical fuel flow and corresponding performance (40% stall margin in 30° bank, 50% in level flight) required to guard against speed instability and buffet. Note: When descending to an assigned holding fix, use holding speeds for descent to holding fix, if practicable. Fuel flow includes increments required to hold speed flying a race track pattern.

PRESS ALT 1000 FT	STD TEMP °C	GROSS WEIGHT - 1000 POUNDS														
		150	146	142	138	134	130	126	122	118	114	110	106	102	98	94
		HOLDING SPEED - KIAS														
		251	247	244	241	237	233	230	226	222	219	215	211	207	203	199
37*	-57	-	-	-	-	-	-	-	-	-	5.1	4.9	4.7	4.5	4.3	4.1
35*	-54	-	-	-	-	-	-	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.0
33*	-50	-	-	-	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.5	4.3	4.1	4.0
31	-46	6.9	6.7	6.3	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.5	4.3	4.1	4.0
29	-42	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.2	5.0	4.8	4.7	4.5	4.3	4.1	3.8
27	-38	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.1	4.0
25	-35	6.7	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0
23	-31	6.6	6.3	6.1	5.9	5.7	5.6	5.3	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.1
21	-27	6.4	6.2	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.6	4.4	4.3	4.2
19	-23	6.4	6.3	6.1	5.9	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.4	4.2
17	-19	6.6	6.3	6.2	6.0	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.3
15	-15	6.7	6.4	6.2	6.1	5.9	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.7	4.5	4.4
13	-11	6.8	6.6	6.3	6.2	6.0	5.9	5.7	5.6	5.4	5.3	5.1	4.9	4.8	4.6	4.5
11	-7	6.9	6.7	6.6	6.3	6.1	6.0	5.8	5.7	5.6	5.3	5.2	5.0	4.9	4.7	4.6
9	-3	7.0	6.8	6.7	6.4	6.2	6.1	5.9	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.7
7	+1	7.1	6.9	6.8	6.6	6.3	6.2	6.0	5.9	5.7	5.6	5.4	5.3	5.1	4.9	4.8
5	+5	7.2	7.0	6.9	6.7	6.6	6.3	6.1	6.0	5.8	5.7	5.5	5.4	5.2	5.0	4.9
3	+9	7.3	7.2	7.0	6.8	6.7	6.4	6.3	6.1	6.0	5.8	5.6	5.5	5.3	5.1	5.0
1	+13	7.5	7.3	7.1	7.0	6.8	6.7	6.4	6.2	6.1	5.9	5.7	5.6	5.4	5.2	5.1

* Add 5 knots to given holding speed (10 knots for 3 red-shaded values) when holding above 32,000 feet.

CORRECTIONS:

Increase (decrease) fuel flow by 100 pounds (0.1) for every 10°C above (below) Standard temperature.

Increase fuel flow by 5%, 200-300 lbs/hr (0.2-0.3), for engine anti-ice ON.

Increase fuel flow by 20%, 800-1300 lbs/hr (0.8-1.3) for engine and wing anti-ice ON.

MD-83 Minimum Control Speeds (Vmca) and Stall Speeds

MINIMUM CONTROL SPEEDS - VMCA

BASED ON:

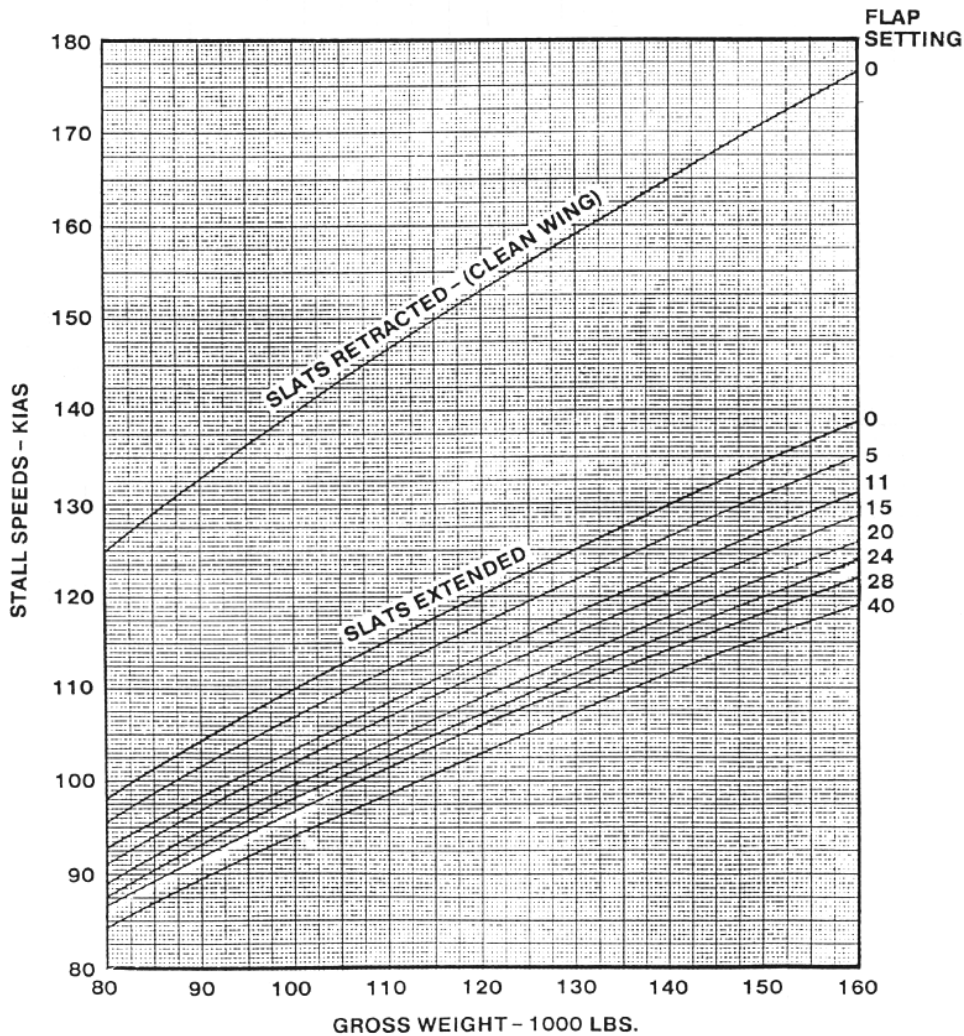
Slats Extended
One Engine Inoperative
Max Reserve Thrust
Any Bleed Air Configuration

TEMP -°F	FLAPS			
	4/EXT	11/EXT	17/EXT	24/EXT
81 & BELOW	121	119	117	114
102	117	115	113	110
122	112	110	108	106

ADJUSTMENTS:

TEMP -°F	KNOTS PER 1000 FT ABOVE S.L.
81 & BELOW	-1.5
82 & ABOVE	-2

STALL SPEEDS



MD-83 Normal Flap/Slat Configuration Min Man and Reference Speeds

	GROSS WEIGHT - 1000 POUNDS																			
	86	90	94	98	102	106	110	114	118	122	126	130	134	138	142	146	150	154	158	160
0 / RET MIN MAN	190	194	199	203	207	211	215	219	223	227	230	234	237	241	244	248	251	255	258	260
0 / EXT MIN MAN	148	152	155	159	162	165	168	171	174	177	180	183	186	188	191	194	197	199	202	203
11 / EXT MIN MAN	130	133	136	139	142	145	147	150	153	155	158	160	163	165	167	169	172	174	176	177
15 / EXT MIN MAN	128	131	134	136	139	142	144	147	149	152	154	157	159	162	164	166	169	171	173	174
28 / EXT MIN MAN	119	122	124	127	130	132	135	137	139	142	144	146	149	151	153	155	157	159	161	162
40 / EXT MIN MAN	115	118	120	123	125	128	130	132	135	137	139	141	144	146	148	150	152	154	156	157
28 / EXT VREF	111	114	116	118	121	123	125	128	130	132	134	136	138	140	142	144	146	148	150	151
40 / EXT VREF	107	110	112	114	117	119	121	123	126	128	130	132	134	136	138	139	141	143	145	146

Note:

Approach Speed is the final approach speed. Normally, it is equal to Vref, adjusted for wind and gust as follows:

Approach Speed = Vref + ½ Wind + Gust.

Tailwinds are excluded.

Notes:

Minimum Approach Speed = Vref + 5

Maximum Approach Speed = Vref + 20