MAX TAKEOFF EPR

40 to 80 KNOTS

AIRPORT OAT °F	°C	UP TO 43 / UP TO 6	50 / 10	59 / 15	68 / 20	77 / 25	86 / 30	95 / 35	104 / 40	113 / 45	122 / 50	129 / 54
AIRPORT PRESSURE ALTITUDE -FEET	-1000	1.43	1.43	1.43	1.43	1.43	1.42	1.40	1.38	1.35	1.33	1.31
	0	1.44	1.44	1.44	1.44	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	1000	1.44	1.44	1.44	1.44	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	2000	1.45	1.45	1.45	1.45	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	3000	1.46	1.46	1.46	1.46	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	4000	1.47	1.47	1.47	1.47	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	4999	1.48	1.48	1.48	1.47	1.44	1.42	1.40	1.38	1.35	1.33	1.31
	5000	1.49	1.49	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32
	6000	1.49	1.49	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32
	7000	1.50	1.50	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32
	8000	1.51	1.51	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32
	9000	1.52	1.52	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32
	10000	1.53	1.52	1.49	1.47	1.45	1.43	1.40	1.38	1.36	1.34	1.32

73-08-24

4 BLEEDS ON 3 PACKS ON

NACELLE A/I ON OR OFF

EPR CORRECTION	
2 PACKS OFF	+.01
3 PACKS OFF	+.02

INITIAL CLIMB EPR

AIRPORT OAT °F	°C	UP TO 41 / UP TO 5	50 / 10	59 / 15	68 / 20	77 / 25	86 / 30	95 / 35	104 / 40	113 / 45	122 / 50	129 / 54
AIRPORT PRESSURE ALTITUDE -FEET	-1000	1.32	1.32	1.32	1.32	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	0	1.32	1.32	1.32	1.32	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	1000	1.33	1.33	1.33	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	2000	1.33	1.33	1.33	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	3000	1.34	1.34	1.34	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	4000	1.35	1.35	1.35	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	5000	1.36	1.36	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	6000	1.37	1.37	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	7000	1.38	1.37	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	8000	1.39	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	9000	1.41	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
	10000	1.42	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19

73-08-24

4 BLEEDS ON 3 PACKS ON

REDUCE EPR BY .01 FOR EACH 20 KNOTS ABOVE 200 KIAS

BASED ON: 200 KIAS
1000 FT ABOVE AIRPORT

EPR CORRECTION A/I ON	
NACELLE	-.02
WING	-.02
NACELLE + WING	-.03

TAKEOFF EPR REDUCTION

*SURPLUS WEIGHT KG	OAT °F	OAT °C	FIELD LENGTH LIMIT 5 TO 13 / -15 TO -11	14 TO 22 / -10 TO -6	23 TO 31 / -5 TO -1	32 TO 40 / 0 TO 4	41 TO 49 / 5 TO 9	50 TO 58 / 10 TO 14	59 TO 67 / 15 TO 19	68 TO 76 / 20 TO 24	77 TO 83 / 25 TO 28	84 AND ABOVE / 29 AND ABOVE	LIMITED BY CLIMB ALL TEMPS
4000 TO 5999											.01		
6000 TO 7999										.01	.01	.01	
8000 TO 9999										.01	.01	.01	.01
10000 TO 11999									.01	.01	.02	.02	.01
12000 TO 13999								.01	.01	.02	.02	.02	.01
14000 TO 15999							.01	.01	.02	.02	.03	.03	.02
16000 TO 17999						.01	.01	.02	.02	.03	.04	.03	.02
18000 TO 19999					.01	.01	.02	.02	.03	.04	.04	.04	.02
20000 TO 21999				.01	.01	.02	.02	.03	.03	.04	.05	.04	.03
22000 TO 23999			.01	.01	.02	.02	.03	.03	.04	.05	.05	.05	.03
24000 TO 25999			.01	.02	.02	.03	.03	.04	.04	.05	.06	.05	.03
26000 TO 27999			.02	.02	.03	.03	.04	.04	.05	.06	.06	.05	.04
28000 TO 29999			.02	.03	.03	.04	.04	.05	.05	.06	.06	.06	.04
30000 TO 31999			.03	.03	.04	.04	.05	.05	.06	.06	.06	.06	.04
32000 TO 33999			.03	.04	.04	.05	.05	.06	.06	.06	.06	.06	.04
34000 TO 35999			.04	.04	.05	.05	.06	.06	.06	.06	.06	.06	.05
36000 TO 37999			.04	.05	.05	.06	.06	.06	.06	.06	.06	.06	.05
38000 TO 39999			.05	.05	.06	.06	.06	.06	.06	.06	.06	.06	.05
40000 AND GREATER			.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06

73-08-24

NOTE: INCREASE V_1 AND V_R BY 1 KNOT FOR EACH .03 EPR REDUCTION.

*BASED ON THE FLAP SETTING AND BLEED CONFIGURATION USED FOR TAKEOFF

IF V_1 PRIOR TO CORRECTION IS FOUND IN THE SHADED AREA OF THE TAKEOFF SPEEDS CHART, FIND THE LIGHTEST WEIGHT ABOVE THE SHADED AREA AND USING THIS WEIGHT AS THE ACTUAL GROSS WEIGHT RECOMPUTE THE SURPLUS WEIGHT AND THE ALLOWABLE EPR REDUCTION.

MINIMUM EPR

PRESSURE ALTITUDE 1000 FT											
-1	S.L.	1	2	3	4	5	6	7	8	9	10
1.32	1.32	1.32	1.33	1.34	1.35	1.36	1.37	1.38	1.38	1.39	1.40

TAKEOFF SPEEDS

DRY

V_1, V_R, V_2

KIAS ANTI SKID ON — CLIMB ATTITUDE 3 AND 4 ENGINE

PRESS ALT 1000 FT	OAT																								PRESS ALT 1000 FT
8 TO 10 °F / °C																-65 / -54 TO 83 / 28						84 / 29 TO 102 / 39			°F / °C 8 TO 10
6 TO 8 °F / °C												-65 / -54 TO 76 / 24				77 / 25 TO 104 / 40						105 / 41 TO 109 / 43			°F / °C 6 TO 8
4 TO 6 °F / °C						-65 / -54 TO 70 / 21						71 / 22 TO 97 / 36				98 / 37 TO 116 / 47									°F / °C 4 TO 6
2 TO 4 °F / °C						-65 / -54 TO 94 / 34						95 / 35 TO 115 / 46				116 / 47 TO 123 / 51									°F / °C 2 TO 4
-1 TO 2 °F / °C			-65 / -54 TO 88 / 31					89 / 32 TO 112 / 44						113 / 45 TO 130 / 55											°F / °C -1 TO 2
GROSS WT 1000 KG	V_1	V_R	V_2	CB AT 3	CB AT 4	V_1	V_R	V_2	CB AT 3	CB AT 4	V_1	V_R	V_2	CB AT 3	CB AT 4	V_1	V_R	V_2	CB AT 3	CB AT 4	V_1	V_R	V_2	CB AT 3	CB AT 4	GROSS WT 1000 KG
FLAPS 10 360	166	177	182	11	13																				360
350	163	173	179	11	13	164	175	179	10	12															350
340	159	169	175	12	14	161	171	175	11	13	162	172	175	10	12										340
330	156	165	172	12	14	158	167	172	11	13	158	168	172	10	12										330
320	152	161	169	13	15	154	163	169	12	14	155	164	169	11	13										320
310	149	158	167	13	15	150	159	167	12	14	153	162	167	11	13										310
300	145	154	163	14	16	147	156	163	13	15	148	157	163	12	14	151	160	163	11	13					300
290	141	150	160	14	16	143	152	160	13	15	145	154	160	12	14	147	156	160	11	13					290
280	138	146	156	15	17	139	148	156	14	16	141	149	156	13	15	143	151	156	12	14					280
270	134	142	153	15	17	135	144	153	14	16	138	146	153	13	15	139	148	153	12	14	141	150	153	11	13	270
260	131	139	150	15	17	132	140	150	14	16	134	142	150	13	15	135	144	150	12	14	138	146	150	11	13	260
250	126	135	146	16	18	127	136	146	15	17	130	138	146	14	16	132	140	146	13	15	134	142	146	12	14	250
240	122	131	144	16	18	123	132	143	15	17	125	134	143	14	16	127	136	143	13	15	130	138	143	12	14	240
230	118	127	142	16	18	119	128	140	15	17	121	130	140	14	16	123	132	140	13	15	126	135	140	12	14	230
220	114	123	139	17	19	116	125	138	16	18	117	126	137	15	17	119	128	137	14	16	122	131	137	13	15	220
210	113	119	136	18	20	112	121	135	17	19	113	122	134	16	18	115	124	134	15	17	118	127	134	14	16	210
200	113	115	135	18	20	112	117	134	17	19	110	119	131	16	18	112	121	131	15	17	114	123	131	14	16	200
190	113	113	135	18	20	112	113	134	17	19	108	115	129	16	18	108	117	127	15	17	110	119	127	14	16	190
180	113	113	135	18	21	112	112	134	17	20	108	111	129	16	19	103	113	125	15	18	106	115	124	14	17	180
FLAPS 20 360	160	170	175	11	12																				360
350	157	166	172	11	12																				350
340	154	163	168	11	12	155	164	168	10	11	156	165	168	9	10										340
330	151	159	165	11	13	151	160	165	10	12	151	160	163	9	11										330
320	147	155	162	11	13	148	156	161	10	12	149	157	161	9	11										320
310	143	151	158	12	14	146	154	159	11	13	147	155	159	10	12										310
300	140	148	155	12	14	141	149	156	11	13	143	151	156	10	12	145	153	156	9	11					300
290	136	144	153	12	14	138	146	153	11	13	139	147	153	10	12	141	149	153	9	11					290
280	132	140	149	13	15	133	141	149	12	14	135	143	149	11	13	137	145	149	10	12					280
270	128	136	146	13	15	130	138	146	12	14	132	140	146	11	13	133	141	146	10	12	135	143	146	9	11	270
260	124	132	143	14	16	126	134	143	13	15	128	136	143	12	14	130	138	143	11	13	132	140	143	10	12	260
250	120	129	140	14	16	122	130	139	13	15	124	132	139	12	14	126	134	139	11	13	128	136	139	10	12	250
240	116	125	137	14	16	117	126	137	13	15	120	128	137	12	14	122	130	137	11	13	125	133	137	10	12	240
230	113	121	135	14	17	114	123	134	13	16	115	124	134	12	15	118	127	134	11	14	120	129	134	10	13	230
220	113	117	133	14	17	112	119	131	13	16	110	120	131	12	15	114	123	131	11	14	116	125	131	10	13	220
210	113	113	132	15	18	112	115	131	14	17	108	117	129	13	16	112	119	128	12	15	113	121	128	11	14	210
200	113	113	132	15	18	112	112	131	14	17	108	113	126	13	16	106	115	125	12	15	109	118	125	11	14	200
190	113	113	132	16	19	112	112	131	15	18	108	110	126	14	17	102	112	122	13	16	104	114	122	12	15	190
180	113	113	132	16	19	112	112	131	15	18	108	108	126	14	17	101	108	120	13	16	100	110	119	12	15	180

SHADED AREA INDICATES PERFORMANCE AFFECTED BY MINIMUM CONTROL SPEED. MINIMUM FIELD LENGTH FOR LIGHTEST WEIGHT ABOVE SHADED AREA IS REQUIRED.

V_1 ADJUSTMENTS	
SLOPE	WIND
ADD 1 KNOT PER 1% UP	ADD 1 KNOT PER 15 KNOT HW
SUB 1 KNOT PER 1% DN	SUB 1 KNOT PER 5 KNOT TW

T3-08-19

K40D-23.10.1 REV3

MAX TAKEOFF EPR

40 TO 80 KNOTS

AIRPORT O A T °F	°C	0 TO 50	59	68	79	86	95	104	113	122	129
		-18 TO 10	15	20	25	30	35	40	45	50	54
AIRPORT PRESSURE ALTITUDE -FEET -1000		1.47	1.47	1.47	1.47	1.47	1.46	1.43	1.41	1.39	1.37
0		1.48	1.48	1.48	1.48	1.48	1.46	1.43	1.41	1.39	1.37
1000		1.50	1.50	1.50	1.50	1.48	1.46	1.43	1.41	1.39	1.37
2000		1.51	1.51	1.51	1.51	1.48	1.46	1.43	1.41	1.39	1.37
3000		1.52	1.52	1.52	1.51	1.48	1.46	1.43	1.41	1.39	1.37
4000		1.53	1.53	1.53	1.51	1.48	1.46	1.43	1.41	1.39	1.37
5000		1.54	1.54	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37
6000		1.55	1.55	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37
7000		1.55	1.55	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37
8000		1.56	1.56	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37
9000		1.57	1.56	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37
10000		1.58	1.56	1.54	1.51	1.48	1.46	1.43	1.41	1.39	1.37

TAKEOFF WITHOUT* WATER INJECTION
32°F & BELOW
0°C & BELOW
1.47
1.48
1.49
1.50
1.51
1.52
1.53
1.54
1.55
1.56
1.57
1.58

4 BLEEDS ON 3 PACKS ON

NACELLE A/I ON OR OFF

EPR CORRECTION	
2 PACKS OFF	+.01
3 PACKS OFF	+.02

*ENGINES EQUIPPED WITH WATER INJECTION SYSTEMS MAY BE OPERATED (PER AFM APPENDIX 49) WITHOUT WATER INJECTION AT THE INDICATED TAKEOFF EPR VALUES AT AMBIENT TEMPERATURES OF 0°C (32°F) AND BELOW.

73-08-24

INITIAL CLIMB EPR

AIRPORT O A T °F	°C	UP TO 41	50	59	68	77	86	95	104	113	122	129
		UP TO 5	10	15	20	25	30	35	40	45	50	54
AIRPORT PRESSURE ALTITUDE -FEET -1000		1.32	1.32	1.32	1.32	1.30	1.27	1.25	1.23	1.21	1.20	1.19
0		1.32	1.32	1.32	1.32	1.30	1.27	1.25	1.23	1.21	1.20	1.19
1000		1.33	1.33	1.33	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
2000		1.33	1.33	1.33	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
3000		1.34	1.34	1.34	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
4000		1.35	1.35	1.35	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
5000		1.36	1.36	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
6000		1.37	1.37	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
7000		1.38	1.37	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
8000		1.39	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
9000		1.41	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19
10000		1.42	1.39	1.36	1.33	1.30	1.27	1.25	1.23	1.21	1.20	1.19

4 BLEEDS ON 3 PACKS ON

REDUCE EPR BY .01 FOR EACH 20 KNOTS ABOVE 200 KIAS

BASED ON: 200 KIAS
1000 FT ABOVE AIRPORT

EPR CORRECTION A/I ON	
NACELLE	-.02
WING	-.02
NACELLE + WING	-.03

73-08-14

TAKEOFF EPR REDUCTION

*SURPLUS WEIGHT KG	O A T °F	°C	FIELD LENGTH LIMIT 5 TO 13 / -15 TO -11	14 TO 22 / -10 TO -6	23 TO 31 / -5 TO -1	32 TO 40 / 0 TO 4	41 TO 49 / 5 TO 9	50 TO 58 / 10 TO 14	59 TO 67 / 15 TO 19	68 TO 76 / 20 TO 24	77 TO 83 / 25 TO 28	84 AND ABOVE / 29 AND ABOVE	LIMITED BY CLIMB ALL TEMPS
4000 TO 5999													
6000 TO 7999												.01	.01
8000 TO 9999											.01	.01	.01
10000 TO 11999										.01	.01	.02	.01
12000 TO 13999									.01	.02	.02	.02	.01
14000 TO 15999								.01	.01	.02	.02	.03	.02
16000 TO 17999							.01	.01	.02	.03	.03	.03	.02
18000 TO 19999						.01	.01	.02	.03	.03	.04	.04	.02
20000 TO 21999						.01	.02	.02	.03	.04	.04	.05	.03
22000 TO 23999					.01	.02	.02	.03	.04	.04	.05	.05	.03
24000 TO 25999				.01	.02	.02	.03	.04	.04	.05	.05	.06	.03
26000 TO 27999			.01	.01	.02	.03	.03	.04	.05	.06	.06	.06	.04
28000 TO 29999			.01	.02	.03	.03	.04	.05	.05	.06	.06	.06	.04
30000 TO 31999			.02	.03	.03	.04	.05	.05	.06	.06	.06	.06	.04
32000 TO 33999			.03	.03	.04	.04	.05	.06	.06	.06	.06	.06	.05
34000 TO 35999			.03	.04	.04	.05	.06	.06	.06	.06	.06	.06	.05
36000 TO 37999			.04	.04	.05	.06	.06	.06	.06	.06	.06	.06	.05
38000 TO 39999			.04	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06
40000 TO 41999			.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
42000 AND GREATER			.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06

NOTE: INCREASE V_1 AND V_R BY 1 KNOT FOR EACH .03 EPR REDUCTION.

*BASED ON THE FLAP SETTING AND BLEED CONFIGURATION USED FOR TAKEOFF

IF V_1 PRIOR TO CORRECTION IS FOUND IN THE SHADED AREA OF THE TAKEOFF SPEEDS CHART, FIND THE LIGHTEST WEIGHT ABOVE THE SHADED AREA AND USING THIS WEIGHT AS THE ACTUAL GROSS WEIGHT RECOMPUTE THE SURPLUS WEIGHT AND THE ALLOWABLE EPR REDUCTION.

73-08-24

MINIMUM EPR

PRESSURE ALTITUDE 1000 FT											
-1	S.L.	1	2	3	4	5	6	7	8	9	10
1.37	1.37	1.38	1.39	1.39	1.40	1.41	1.42	1.43	1.44	1.45	1.46

TAKEOFF SPEEDS

WET

BOEING 747

OPERATIONS MANUAL

747-100/200 JT9D-7

V_1, V_R, V_2

KIAS ANTI SKID ON — CLIMB ATTITUDE 3 AND 4 ENGINE

PRESS ALT 1000 FT	OAT																								PRESS ALT 1000 FT
8 TO 10 °F / °C																0 TO 75 / -18 TO 24						76 TO 102 / 25 TO 39			°F / °C 8 TO 10
6 TO 8 °F / °C												0 TO 68 / -18 TO 20				69 TO 95 / 21 TO 35						96 TO 108 / 36 TO 42			°F / °C 6 TO 8
4 TO 6 °F / °C												0 TO 92 / -18 TO 33				93 TO 116 / 34 TO 47									°F / °C 4 TO 6
2 TO 4 °F / °C						0 TO 88 / -18 TO 31						89 TO 113 / 32 TO 45				114 TO 123 / 46 TO 51									°F / °C 2 TO 4
-1 TO 2 °F / °C			0 TO 86 / -18 TO 30			87 TO 109 / 31 TO 43						110 TO 130 / 44 TO 55													°F / °C -1 TO 2
GROSS WT 1000 KG	V_1	V_R	V_2	CB 3	AT 4	V_1	V_R	V_2	CB 3	AT 4	V_1	V_R	V_2	CB 3	AT 4	V_1	V_R	V_2	CB 3	AT 4	V_1	V	V_2	CB 3	AT 4	GROSS WT 1000 KG
FLAPS 10																									FLAPS 10
360	163	175	182	12	14	164	177	183	11	13															360
350	160	171	179	12	14	162	173	179	11	13															350
340	158	168	176	13	15	159	169	175	12	14	160	171	175	11	13	161	172	175	10	12					340
330	155	164	173	13	15	155	165	172	12	14	157	167	172	11	13	158	168	172	10	12	160	170	172	9	11	330
320	151	160	169	14	16	153	162	169	13	15	154	163	169	12	14	155	164	169	11	13	157	167	169	10	12	320
310	147	156	166	14	16	149	158	167	13	15	151	160	167	12	14	153	162	167	11	13	155	163	167	10	12	310
300	143	152	163	15	17	145	154	163	14	16	147	156	163	13	15	148	157	163	12	14	150	159	163	11	13	300
290	139	148	159	15	17	141	150	160	14	16	143	152	160	13	15	145	154	160	12	14	147	155	160	11	13	290
280	136	145	156	16	18	137	146	156	15	17	139	148	156	14	16	140	149	156	13	15	142	152	156	12	14	280
270	132	141	153	16	18	133	142	153	15	17	135	144	153	14	16	137	146	153	13	15	139	148	153	12	14	270
260	128	137	150	16	18	129	138	150	15	17	132	141	150	14	16	133	142	150	13	15	135	144	150	12	14	260
250	124	133	147	17	19	125	134	146	16	18	127	136	146	15	17	129	138	146	14	16	131	140	146	13	15	250
240	119	129	145	17	19	120	130	143	16	18	122	132	143	15	17	125	134	143	14	16	127	137	143	13	15	240
230	116	125	143	17	19	116	126	141	16	18	118	128	140	15	17	120	130	140	14	16	122	133	140	13	15	230
220	116	121	141	18	20	116	123	139	17	19	115	125	137	16	18	116	126	137	15	17	119	129	137	14	16	220
210	116	118	138	19	21	116	119	137	18	20	112	121	135	17	19	112	122	134	16	18	115	125	134	15	17	210
200	116	116	138	19	21	116	116	134	18	20	112	117	133	17	19	109	119	131	16	18	110	120	130	15	17	200
190	116	116	138	19	21	116	116	132	18	20	112	113	131	17	19	106	115	129	16	18	106	116	126	15	17	190
FLAPS 20																									FLAPS 20
350	155	165	171	12	13																				350
340	152	161	168	12	13	153	163	168	11	12	154	164	168	10	11	155	165	168	9	10					340
330	149	157	165	12	14	150	159	165	11	13	151	160	165	10	12	151	160	165	9	11	156	166	165	8	10	330
320	145	153	162	12	14	147	155	162	11	13	148	156	162	10	12	149	157	162	9	11	150	160	162	8	10	320
310	141	149	159	13	15	143	151	159	12	14	146	154	159	11	13	147	155	159	10	12	147	156	159	9	11	310
300	138	146	156	13	15	140	148	156	12	14	141	149	156	11	13	143	151	156	10	12	143	153	156	9	11	300
290	134	142	153	13	15	136	144	153	12	14	138	146	153	11	13	139	147	153	10	12	140	149	153	9	11	290
280	130	138	149	14	16	132	140	149	13	15	133	141	149	12	14	135	143	149	11	13	136	145	149	10	12	280
270	126	134	146	14	16	128	136	146	13	15	130	138	146	12	14	132	140	146	11	13	133	142	146	10	12	270
260	123	131	143	15	17	124	132	143	14	16	126	134	143	13	15	128	136	143	12	14	129	138	143	11	13	260
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240	116	123	139	15	17	116	125	137	14	16	117	126	137	13	15	120	128	137	12	14	123	130	137	11	13	240
230	116	119	137	15	18	116	121	136	14	17	114	123	134	13	16	115	124	134	12	15	119	127	134	11	14	230
220	116	116	136	15	18	116	117	136	14	17	112	119	131	13	16	111	120	131	12	15	115	123	131	11	14	220
210	116	116	136	16	19	116	116	136	15	18	112	115	131	14	17	108	117	128	13	16	112	119	128	12	15	210
200	116	116	136	16	19	116	116	136	15	18	112	112	131	14	17	106	113	126	13	16	109	115	125	12	15	200
190	116	116	136	17	20	116	116	136	16	19	112	112	131	15	18	106	110	123	14	17	105	112	121	13	16	190
180	116	116	136	17	20	116	116	136	16	19	112	112	131	15	18	106	106	123	14	17	101	108	119	13	16	180

T3-08-19

NOTE: WATER INJECTION TAKEOFF LIMITED TO AMBIENT TEMPERATURES OF -18°C (0°F) AND ABOVE.

FOR DRY TAKEOFFS AT THE WET RATINGS, USE TAKEOFF SPEEDS ASSOCIATED WITH -18°C, ALTHOUGH SUCH OPERATION IS ALLOWED BETWEEN AMBIENT TEMPERATURES OF -54°C TO 0°C (-65°F TO 32°F).

SHADED AREA INDICATES PERFORMANCE AFFECTED BY MINIMUM CONTROL SPEED. MINIMUM FIELD LENGTH FOR LIGHTEST WEIGHT ABOVE SHADED AREA IS REQUIRED.

V1 ADJUSTMENTS	
SLOPE	WIND
ADD 1 KNOT PER 1% UP	ADD 1 KNOT PER 15 KNOT HW
SUB 1 KNOT PER 1% DN	SUB 1 KNOT PER 5 KNOT TW

K40D-23.10.0