

Boeing 767-300 Performance (PW4060)

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POWER SETTING CHARTS

767-300 Takeoff Thrust Setting, EPR

Actual airport temperature must be less than standard plus 39 °C.																						
PRESS ALT	AIRPORT TEMPERATURE °F (°C)																					
	UP TO 50 (10)	55 (13)	60 (16)	65 (18)	70 (21)	75 (24)	80 (27)	85 (29)	90 (32)	95 (36)	100 (39)	105 (41)	110 (43)	115 (46)	120 (49)	125 (52)	130 (54)	135 (57)	140 (60)	145 (62)	150 (65)	158 (68)
8000	1.64		1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.54	1.53	1.51	1.47	1.46	1.42	1.40	1.37	1.35	1.32	1.29	1.27	1.25
7000	1.62			1.62	1.61	1.60	1.59	1.58	1.56	1.54	1.53	1.51	1.47	1.46	1.42	1.40	1.37	1.35	1.32	1.29	1.27	1.25
6000	1.61				1.61	1.60	1.59	1.58	1.56	1.54	1.53	1.50	1.47	1.46	1.42	1.40	1.37	1.35	1.32	1.29	1.27	1.25
5000	1.60					1.60	1.59	1.58	1.56	1.54	1.53	1.50	1.47	1.46	1.42	1.40	1.37	1.35	1.32	1.29	1.27	1.25
4000	1.60					1.60	1.59	1.58	1.56	1.54	1.53	1.51	1.48	1.46	1.42	1.40	1.37	1.35	1.32	1.29	1.27	1.25
3000	1.59						1.59	1.58	1.56	1.55	1.53	1.51	1.48	1.46	1.42	1.40	1.37	1.36	1.32	1.29	1.27	1.25
2000	1.58							1.58	1.56	1.55	1.53	1.51	1.48	1.46	1.42	1.40	1.38	1.36	1.33	1.30	1.27	1.25
1000	1.57							1.57	1.56	1.55	1.53	1.51	1.48	1.46	1.42	1.40	1.38	1.36	1.33	1.30	1.28	1.24
SL	1.56							1.56	1.55	1.55	1.53	1.51	1.48	1.46	1.42	1.40	1.38	1.36	1.33	1.30	1.28	1.23

Enter table with pressure altitude and airport temperature to find **maximum** EPR.

Enter table with pressure altitude and assumed temperature to find **reduced** EPR.

Values valid for both packs on, anti-ice on or off, and when set while airspeed is between 40 and 80 knots.

Increase EPR 0.01 if packs are off.

Reduced Takeoff Thrust

Reduced EPR is the minimum thrust required under normal conditions and is recommended as it results in reduced engine wear and fuel consumption.

Do not use reduced takeoff thrust when:

- Takeoff runway has standing water, ice, slush or snow
- Headwind adjustment has been used to increase allowable takeoff gross weight
- Takeoff is to be made with a tailwind
- A brake is deactivated
- Antiskid system is inoperative
- EPR indications are inoperative
- Airplane has been deiced

The thrust management computer automatically computes reduced takeoff thrust when an assumed temperature higher than ambient is set on EICAS using the TEMP SEL knob.

To determine ASSUMED TEMPERATURE, see the planned weight manifest. Use the assumed temperature to determine V1, Vr and V2 when reduced takeoff EPR is to be used. If the V1 and Vr

determined using the assumed temperature are less than minimum V1 for the actual temperature, use minimum V1 for V1 and Vr.

767-300 Maximum Climb Thrust, EPR

Maximum Climb Thrust - EPR 250/300/.80 Schedule									
TAT °C	PRESSURE ALTITUDE 1000 FEET								
	0	5	10	15	20	25	30	35	40
60	1.24	1.25	1.25	1.21	1.20	1.18	1.14	1.08	1.05
50	1.28	1.29	1.29	1.26	1.24	1.23	1.21	1.15	1.11
40	1.32	1.34	1.34	1.31	1.30	1.29	1.27	1.21	1.18
30	1.33	1.40	1.40	1.38	1.37	1.36	1.35	1.29	1.25
20	1.33	1.40	1.46	1.46	1.45	1.44	1.43	1.37	1.34
10	1.33	1.40	1.46	1.47	1.53	1.53	1.53	1.47	1.44
0	1.33	1.40	1.46	1.47	1.53	1.57	1.63	1.57	1.54
-10	1.33	1.40	1.46	1.47	1.53	1.57	1.64	1.67	1.63
-20	1.33	1.40	1.46	1.47	1.53	1.57	1.64	1.68	1.66
PACKS OFF	+.01	+.01	+.01	+.01	+.01	+.01	+.02	+.02	+.03
WING A/I ON	-.01	-.02	-.02	-.03	-.03	-.03	-.04	-.04	-.05
ENG A/I ON	-.02	-.03	-.04	-.05	-.05	-.05	-.07	-.07	-.08

TAKEOFF CHARTS

767-300 Flaps 5 Takeoff Speeds

FLAPS 5	WT	V1	Vr	V2	Flap Retract	
					5-1	1-0
V1 Adjustments: Altitude/Temperature, Slope, Wind - See Adjustments page.	400	161	166	171	191	234
	396	160	165	171	190	233
	392	159	164	170	189	232
	388	158	163	169	188	231
	384	157	162	168	187	229
	380	156	161	167	185	227
V1 speed in shaded	376	155	160	167	184	226

area: After applying all required adjustments check that adjusted V1 is not below V Minimum - See Adjustments page.	372	154	159	166	183	225
	368	153	158	165	182	224
	364	152	157	164	181	223
	360	151	156	163	180	221
	356	150	155	162	179	220
	352	149	154	161	178	219
	348	148	153	160	177	218
	344	147	152	159	176	216
	340	145	151	158	175	214
	336	144	150	157	174	213
	332	143	149	156	173	212
	328	142	148	155	172	210
	324	141	147	154	170	208
	320	140	145	153	168	206
	316	140	144	153	167	205
	312	139	143	152	166	204
	308	138	142	151	165	203
	304	136	141	150	164	201
	300	134	140	149	162	199
	296	134	139	148	161	198
	292	133	138	147	160	197
	288	132	137	146	159	195
	284	130	136	145	157	193
	280	128	134	144	155	191
	276	127	134	143	154	190
	272	126	133	142	153	188

	268	125	132	141	152	186
	264	123	130	140	150	184
	260	121	128	138	148	182
	256	120	127	137	147	181
	252	119	126	136	146	180
	248	118	125	135	144	178
	244	116	123	134	142	176
	240	114	121	133	140	174

767-300 Flaps 15 Takeoff Speeds

FLAPS 15 V1 Adjustments: Altitude/Temperature, Slope, Wind - See Adjustments page. Vr Adjustments: Altitude/Temperature - See Adjustments page. V1 speed in shaded area: After applying all required adjustments check that adjusted V1 is not below V Minimum - See Adjustments page.	WT	V1	Vr	V2	Flap Retract		
					15-5	5-1	1-0
	400	156	159	164	175	191	234
	396	155	158	164	174	190	233
	392	154	157	163	173	189	232
	388	153	156	162	172	188	231
	384	152	155	161	171	187	229
	380	151	154	160	170	185	227
	376	150	153	160	169	184	226
	372	149	152	159	168	183	225
	368	148	151	158	167	182	224
	364	147	150	157	166	181	223
	360	146	149	156	165	180	221
	356	145	148	156	164	179	220
	352	144	147	155	163	178	219
	348	143	146	154	162	177	218
	344	142	145	153	161	176	216

340	141	144	152	160	175	214
336	140	143	151	159	174	213
332	139	142	150	158	173	212
328	138	141	149	157	172	210
324	137	140	148	156	170	208
320	135	139	147	155	168	206
316	134	138	146	154	167	205
312	133	137	145	153	166	204
308	132	136	144	152	165	203
304	131	135	143	151	164	201
300	129	134	142	149	162	199
296	128	133	142	148	161	198
292	127	132	141	147	160	197
288	126	131	140	146	159	195
284	125	130	139	145	157	193
280	124	128	138	143	155	191
276	123	127	137	142	154	190
272	122	126	136	141	153	188
268	121	125	135	140	152	186
264	120	124	134	139	150	184
260	118	122	133	137	148	182
256	117	121	132	136	147	181
252	116	120	131	135	146	180
248	115	119	130	133	144	178
244	114	118	129	131	142	176
240	112	116	127	129	140	174

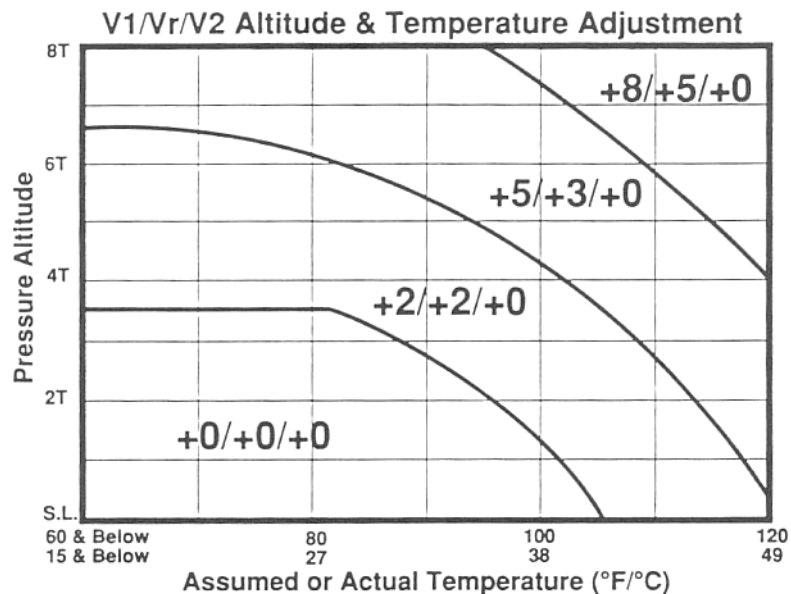
767-300 Flaps 20 Takeoff Speeds

FLAPS 20	WT	V1	Vr	V2	Flap Retract		
					20-5	5-1	1-0
V1 Adjustments: Altitude/Temperature, Slope, Wind - See Adjustments page.	400	153	154	160	175	191	234
	396	152	153	159	174	190	233
	392	151	152	158	173	189	232
	388	150	151	157	172	188	231
Vr Adjustments: Altitude/Temperature - See Adjustments page.	384	149	150	156	171	187	229
	380	148	149	155	170	185	227
	376	147	148	155	169	184	226
	372	146	147	154	168	183	225
V1 speed in shaded area: After applying all required adjustments check that adjusted V1 is not below V Minimum - See Adjustments page.	368	145	146	153	167	182	224
	364	144	145	152	166	181	223
	360	142	144	151	165	180	221
	356	141	143	150	164	179	220
	352	140	142	149	163	178	219
	348	139	141	148	162	177	218
	344	138	140	147	161	176	216
	340	137	139	146	160	175	214
	336	136	138	146	159	174	213
	332	135	137	145	158	173	212
	328	134	136	144	157	172	210
	324	133	135	143	156	170	208
	320	131	134	142	155	168	206
	316	130	133	142	154	167	205
	312	129	132	141	153	166	204

	308	128	131	140	152	165	203
	304	127	130	139	151	164	201
	300	126	129	138	149	162	199
	296	125	128	137	148	161	198
	292	124	127	136	147	160	197
	288	123	126	135	146	159	195
	284	122	125	134	145	157	193
	280	120	123	133	143	155	191
	276	119	122	132	142	154	190
	272	118	121	131	141	153	188
	268	117	120	130	140	152	186
	264	116	119	129	139	150	184
	260	114	118	128	137	148	182
	256	113	117	127	136	147	181
	252	112	116	126	135	146	180
	248	111	115	125	133	144	178
	244	109	114	124	131	142	176
	240	107	112	123	129	140	174

767-300 Takeoff Speeds Adjustments

TAKEOFF SPEEDS ADJUSTMENTS – 767-300



V₁ - RUNWAY SLOPE ADJMT

ARPT	RUNWAY	V ₁ ADJMT
COS	17	-1
	35	+1
LAS	1R, 7	-1
	19L, 25	+1
SEA	16R/L	-1
	34R/L	+1

V₁ - TAILWIND ADJMT

WIND	-5	-10
V ₁ ADJMT	-2	-4

V₁ AND V_R MINIMUMS

PRESS ALT	ACTUAL OAT °F/°C								
	≤ 50 ≤ 10	60 15	70 21	80 27	90 32	100 39	110 43	120 49	130 54
8000	97	96	96	95	93	91	NA	NA	NA
6000	100	100	100	99	97	95	92	NA	NA
4000	104	103	103	103	101	99	96	93	NA
2000	107	106	106	106	105	103	100	96	93
SL	110	110	110	110	110	107	104	100	97

CRUISE CHARTS

767-300 Mach .80 Cruise

FLT LEVEL STD TEMP °C	IAS TAS	GROSS WEIGHT - 1000 LBS									
		400	380	360	340	320	300	280	260	240	220
430 -57	224 459	-	-	-	-	-	-	-	1.47 49.7	1.36 56.7	1.27 62.7
420 -57	231 459	-	-	-	-	-	-	1.54 45.1	1.40 51.6	1.32 57.4	1.23 62.5
410 -57	237 459	-	-	-	-	-	-	1.45 47.2	1.35 52.6	1.26 57.5	1.22 61.9
400 -57	242 459	-	-	-	-	-	1.48 43.3	1.38 48.5	1.30 53.2	1.24 57.3	1.20 61.2
390 -57	248 459	-	-	-	-	1.51 40.1	1.41 44.9	1.32 49.3	1.26 53.2	1.22 56.9	1.18 60.3
380 -57	254 459	-	-	-	1.53 37.2	1.43 41.8	1.34 45.9	1.28 49.7	1.23 53.1	1.19 56.3	1.16 59.4
370 -57	260 459	-	-	-	1.44 39.1	1.36 42.9	1.29 46.5	1.24 49.7	1.20 52.7	1.17 55.5	1.13 58.3
360 -56	266 459	-	-	1.45 36.7	1.37 40.3	1.30 43.6	1.25 46.6	1.21 49.4	1.18 52.1	1.15 54.6	1.13 57.1
350 -54	272 461	-	1.46 34.6	1.38 37.9	1.31 41.1	1.26 43.7	1.22 46.4	1.19 48.9	1.16 51.2	1.14 53.5	1.12 55.6
340 -52	278 463	1.47 32.8	1.39 35.8	1.32 38.6	1.27 41.2	1.23 43.6	1.20 46.1	1.17 48.1	1.15 50.3	1.13 52.2	1.11 54.2
330 -50	284 465	1.39 33.9	1.33 36.5	1.28 38.9	1.24 41.2	1.20 43.3	1.18 45.3	1.15 47.3	1.13 49.2	1.12 50.9	1.10 52.7
320 -48	291 467	1.33 34.7	1.28 36.9	1.24 39.1	1.21 40.9	1.18 42.8	1.16 44.6	1.14 46.4	1.12 48.1	1.11 49.6	1.09 51.2
310 -46	297 469	1.28 35.1	1.24 36.9	1.21 38.8	1.19 40.5	1.16 42.1	1.14 43.8	1.13 45.3	1.11 46.8	1.10 48.3	1.09 49.7
300 -44	304 471	1.25 35.1	1.22 36.8	1.19 38.4	1.17 39.9	1.15 41.4	1.13 42.9	1.11 44.2	1.10 45.6	1.09 46.9	1.08 48.2

EPR

NAM/1000 POUNDS

Adjustments:

TAS (knots) is for standard temperature. Add 1 knot/°C above standard. Subtract 1 knot/°C below standard.

Fuel consumption (1000 pound/hour) = TAS for actual temperature / (NAM/1000 pounds)

767-300 300 Knot Cruise

Above FL 300, 300 KIAS would be above Mach .80.

FLT LEVEL STD TEMP °C	TAS	GROSS WEIGHT - 1000 LBS									
		400	380	360	340	320	300	280	260	240	220
290 -42	459	1.22 35.1	1.19 36.8	1.18 38.4	1.15 39.9	1.13 41.4	1.11 42.9	1.09 44.2	1.08 45.6	1.06 46.9	1.05 48.2
280 -40	452	1.20 35.3	1.18 36.8	1.16 38.3	1.14 39.8	1.11 41.3	1.09 42.7	1.08 44.1	1.07 45.5	1.06 46.8	1.05 48.1
270 -40	445	1.18 35.1	1.16 36.6	1.14 38.0	1.12 39.5	1.10 40.9	1.08 42.3	1.07 43.7	1.05 45.0	1.04 46.3	1.03 47.6
260 -36	438	1.16 34.8	1.14 36.2	1.12 37.5	1.10 38.9	1.09 40.3	1.08 41.6	1.06 42.9	1.05 44.2	1.04 45.4	1.03 46.7
250 -34	431	1.15 34.4	1.13 35.8	1.11 37.1	1.09 38.5	1.08 39.9	1.07 41.2	1.05 42.5	1.03 43.9	1.02 45.2	1.01 46.4
200 -24	399	1.09 32.6	1.08 34.1	1.06 35.3	1.05 36.5	1.03 37.9	1.02 38.9	1.01 40.1	1.00 41.3	0.99 42.3	0.98 43.4
150 -14	371	1.06 30.1	1.04 31.1	1.03 32.1	1.03 33.1	1.02 33.9	1.01 34.8	1.00 35.7	0.99 36.6	0.98 37.4	0.98 38.3

EPR

NAM/1000 POUNDS

Adjustments:

TAS (knots) is for standard temperature. Add 1 knot/°C above standard. Subtract 1 knot/°C below standard.

Fuel consumption (1000 pound/hour) = TAS for actual temperature / (NAM/1000 pounds)

767-300 Optimum and Maximum Cruise Weights - Mach .80/LRC

	Optimum weight for best NAM/1000 pounds fuel at Mach .80 or LRC. Use WIND/ALTITUDE TRADE tables to determine altitude for best NGM/1000 pounds fuel. Good for all temperatures.	Maximum weight at which Mach .80 or LRC speed can be maintained with maximum cruise thrust for a given temperature and altitude. This is a performance limit table. It does not indicate fuel efficient altitudes.		
FLT LEVEL STD TEMP °C	WEIGHT	STATIC AIR TEMPERATURE		
		Ts + 10°C & BELOW	Ts + 15°C	Ts + 20°C
430 -57	227,000	269,000 .794/225	269,500 .794/225	260,000 .796/225
410 -57	238,000	295,000 .794/234	295,000 .794/234	285,000 .796/236
390 -57	263,000	325,000 .793/245	325,000 .793/245	315,000 .795/244
370 -57	288,000	350,000 .792/257	350,000 .792/257	350,000 .795/258
350 -54	333,000	399,000 .792/270	399,000 .792/270	388,000 .794/271

LANDING CHARTS

767-300 Minimum Maneuvering and Vref

MINIMUM MANEUVERING AND LANDING FLAP MANEUVERING SPEEDS (LFMS) 767-300

WEIGHT	FLAPS						
	0	1	5	15	20	25	30
400	257	214	195	190	187	166	172
396	256	213	194	189	186	166	171
392	255	212	193	188	185	165	170
388	253	211	192	187	184	164	169
384	251	209	191	186	183	163	168
380	249	207	190	185	182	162	166
376	248	206	189	184	181	161	165
372	247	205	188	183	180	160	164
368	246	204	187	182	179	159	163
364	245	203	186	181	178	158	161
360	243	201	184	179	177	157	159
356	242	200	183	178	176	157	158
352	241	199	182	177	175	156	157
348	240	198	181	176	174	155	155
344	238	197	180	175	173	154	153
340	236	195	179	174	172	153	151
336	235	194	178	173	171	152	149
332	233	193	177	172	170	151	148
328	231	191	176	171	169	150	147
324	229	189	175	170	167	149	146
320	227	187	173	168	165	148	145
316	226	186	172	167	164	147	145
312	225	185	171	166	163	146	144
308	223	184	170	165	162	145	143
304	221	183	168	164	160	144	142
300	219	181	166	162	158	143	141
296	218	180	165	161	157	142	140
292	216	179	164	160	156	141	139
288	214	177	163	159	155	140	138
284	212	175	161	158	154	139	137
280	210	173	159	156	152	138	136
276	209	172	158	155	151	137	136
272	207	171	157	154	150	136	135
268	205	169	156	153	149	135	134
264	203	167	155	151	147	134	132
260	201	165	153	149	145	132	130
256	199	164	152	148	144	131	129
252	197	163	151	147	143	130	129
248	195	161	149	146	141	129	128
244	193	159	147	145	139	128	128
240	191	157	145	143	137	127	127

Speeds above heavy line are above max structural landing weight.

Speeds within shaded area are above max extended flaps landing weight.

Wind Corrections:

- The Flaps 30 Landing Flap Maneuvering Speed (LFMS) is the equivalent of Vref or REF in the Flight Manual.
- Target Speeds - Add 1/2 the steady headwind component plus the full gust value to the LFMS. Total addition should not exceed 20 knots. Minimum target speed is LFMS + 5.

- Threshold Speeds - Add only the full gust value to the LFMS. Total addition should not exceed 20 knots.
- Autoland Approaches Using Autothrottle - Set target speed to LFMS + 5. No further corrections are necessary for wind.

767-300 Max Go-Around Thrust, EPR

PRESS ALT	TOTAL AIR TEMPERATURE ° F (° C)														
	UP TO 50 (10)	55 (13)	60 (16)	65 (18)	70 (21)	75 (24)	80 (27)	85 (29)	90 (32)	95 (35)	100 (38)	105 (41)	110 (43)	115 (46)	120 (49)
8000	1.66	1.66	1.66	1.65	1.65	1.64	1.62	1.61	1.59	1.57	1.55	1.53	1.51	1.48	1.46
6000	1.63	1.63	1.63	1.63	1.63	1.63	1.61	1.61	1.59	1.57	1.55	1.53	1.51	1.48	1.46
4000	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.61	1.59	1.57	1.55	1.53	1.51	1.48	1.46
2000	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.59	1.57	1.55	1.53	1.51	1.48	1.47
SL	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.56	1.54	1.51	1.48	1.46

Enter table with airport pressure altitude and airport temperature to find go-around EPR.
 Values valid for two packs on and engine anti-ice on or off.
 For wing anti-ice on - Subtract 0.01 EPR.
 For packs off - Add 0.01 EPR.