

APU AND ENGINE FUEL CONSUMPTION

APU FUEL CONSUMPTION

The table below shows the APU fuel consumption on the ground and during level flight at 5000 ft, 25000 ft, and 37000 ft altitudes. The data is calculated for different airspeeds, APU air bleeds and electrical loads.

APU FUEL CONSUMPTION

Applicable to Sundstrand APU T-62T-40C11 or T-62T-40C14 (500R)

ALTITUDE (ft)	AIRSPEED (KIAS)	APU AIR BLEED	APU GEN. LOAD	APU FUEL FLOW (kg/min)
0	0	No Load	No Load	0.72
			Max Load	0.77
		2 Packs	No Load	1.13
			Max Load	1.24
5000	140	No Load	No Load	0.37
			Max Load	0.88
		2 Packs	No Load	1.17
			Max Load	1.29
	220	No Load	No Load	0.37
			Max Load	0.88
		2 Packs	No Load	1.17
			Max Load	1.29
25000	140	No Load	No Load	0.47
			Max Load	0.53
		2 Packs	No Load	0.59
			Max Load	0.70
	220	No Load	No Load	0.47
			Max Load	0.53
		2 Packs	No Load	0.59
			Max Load	0.70
37000	140	No Load	No Load	0.25
			Max Load	0.34
		2 Packs	Max Load	0.44
	220	No Load	No Load	0.25
			Max Load	0.31
		2 Packs	Max Load	0.42

NOTE: Fuel density may range from 0.785 to 0.811 kg/l. The values above have been determined for an adopted fuel density of 0.811 kg/l.

ENGINE FUEL CONSUMPTION

The following values established for taxi, take-off, approach and go around fuel consumption should be considered when calculating detailed flight plans.

FUEL CONSUMPTION

ENGINE	PHASE OF FLIGHT	FUEL CONSUMPTION
		kg/min
AE3007A	TAXI	7.0
	TAKE-OFF	45.0
	APPROACH AND LANDING	17.5
	GO AROUND	45.0
AE3007A1/1 A1, A3, A1/3 A1P	TAXI	7.3
	TAKE-OFF	48.0
	APPROACH AND LANDING	18.5
	GO AROUND	48.0

CLIMB

CLIMB SPEEDS

MAXIMUM ANGLE SPEED

This speed is recommended for obstacle clearance in order to reach an altitude on minimum ground distance. The recommended maximum angle speed is related to flaps up, all engines operating and is approximately VFS for all gross weights and altitudes (see Final Segment Speed table on section 1-04-15).

MAXIMUM RATE OF CLIMB SPEED

This speed is recommended when maximum rate of climb is desired in order to reach an altitude on minimum climb time. The recommended maximum rate of climb speed is related to flaps up, all engines operating and is function of gross weights and altitudes as shown in the table below:

ALT (ft)	WEIGHT (kg)									
	14000	15000	16000	17000	18000	19000	20000	21000	22000	23000
5000	213	214	215	216	217	218	219	220	221	222
10000	204	205	206	207	208	209	211	212	213	215
15000	199	200	202	202	205	208	209	211	212	214
20000	194	195	197	198	200	201	203	204	206	208
25000	187	189	190	192	194	196	198	200	202	205

NOTE: Speeds presented in KIAS.

Maintain the speeds above until intercepting Mach 0.56. Then fly with this Mach number until level off.

CLIMB TABLES

The climb planning tables show fuel consumption, distance, and time considering the airplane in climb configuration from the Sea Level up to the top of climb. Data are shown for various takeoff weights, ISA deviations and cruise altitudes.

The takeoff fuel consumption is not considered in the following tables.

Tables presents the scheduled climb speed according to the autopilot climb mode, i.e.:

- 240 KIAS for altitudes up to 10000 ft, increasing linearly to 270 KIAS from 10000 to 12000 ft, maintaining 270 KIAS from 12000 to 17400 ft and 0.56 Mach above 17400 ft.

The associated conditions are:

- Thrust Mode..... CLB
- Flaps UP
- Gear UP
- Bleeds OPEN
- Anti-Ice OFF

EXAMPLE:

Given:

Departure Airport Elevation 2100 ft
 Takeoff weight 18000 kg
 ISA Condition
 Cruise Altitude 33000 ft

RESULTS

Data for 3600 ft (2100 ft + 1500 ft above departure airport) obtained from interpolation from the Sea Level to 5000 ft climb table:

Fuel: 42.5 kg
 Distance: 4.3 NM
 Time: 1.4 min

Data provided from the Sea Level to 33000 ft (Top of Climb) table:

Fuel: 433 kg
 Distance: 78 NM
 Time: 15 min

The fuel, distance and time spent during the climb phase (from 3600 ft to 33000 ft) are:

Fuel: $433 - 42.5 = 390.5$ kg
 Distance: $78 - 4.3 = 73.7$ NM
 Time: $15 - 1.4 = 13.6$ min

NOTE: The fuel consumption related to the takeoff phase is provided on the Section 1-05-07.



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REVISION 27

AOM-145/1114

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 5000 AND 6000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED: OPEN

WEIGHT KG			5000 FT ISA + °C					6000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	72	74	77	81	93	86	89	93	97	112
	DISTANCE	NM	8	8	8	9	11	10	10	10	11	14
	TIME	MIN	2	2	2	2	3	2	2	2	3	3
21000	FUEL	KG	67	69	72	75	86	80	84	87	91	104
	DISTANCE	NM	7	8	8	8	11	9	9	10	10	13
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
20000	FUEL	KG	62	65	67	70	80	75	78	81	85	97
	DISTANCE	NM	7	7	7	8	10	8	9	9	10	12
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
19000	FUEL	KG	58	60	63	66	74	70	73	76	79	90
	DISTANCE	NM	6	7	7	7	9	8	8	8	9	11
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
18000	FUEL	KG	54	56	59	61	69	65	68	70	73	83
	DISTANCE	NM	6	6	6	7	9	7	8	8	8	10
	TIME	MIN	1	2	2	2	2	2	2	2	2	2
17000	FUEL	KG	50	52	54	57	64	61	63	65	68	77
	DISTANCE	NM	5	6	6	6	8	7	7	7	8	10
	TIME	MIN	1	1	1	1	2	2	2	2	2	2
16000	FUEL	KG	47	49	50	53	59	56	58	61	63	71
	DISTANCE	NM	5	5	5	6	7	6	6	7	7	9
	TIME	MIN	1	1	1	1	2	2	2	2	2	2
15000	FUEL	KG	43	45	47	49	54	52	54	56	58	65
	DISTANCE	NM	5	5	5	5	7	6	6	6	7	8
	TIME	MIN	1	1	1	1	2	1	1	2	2	2
14000	FUEL	KG	40	41	43	45	50	48	50	52	54	60
	DISTANCE	NM	4	4	5	5	6	5	5	6	6	7
	TIME	MIN	1	1	1	1	1	1	1	1	1	2
13000	FUEL	KG	36	38	39	41	46	44	45	47	49	55
	DISTANCE	NM	4	4	4	4	6	5	5	5	5	7
	TIME	MIN	1	1	1	1	1	1	1	1	1	2
12000	FUEL	KG	33	35	36	37	41	40	41	43	45	50
	DISTANCE	NM	4	4	4	4	5	4	5	5	5	6
	TIME	MIN	1	1	1	1	1	1	1	1	1	1

ANTI ICE ON CORRECTIONS
FUEL

BELOW ISA
INCREASE 8%

ISA
INCREASE 8%

ABOVE ISA
INCREASE 15%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 7000 AND 8000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			7000 FT ISA + °C					8000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	101	105	109	114	131	116	120	125	130	151
	DISTANCE	NM	11	12	12	13	17	13	14	14	15	20
	TIME	MIN	3	3	3	3	4	3	3	3	4	5
21000	FUEL	KG	94	98	102	106	122	108	112	116	122	140
	DISTANCE	NM	11	11	12	12	16	12	13	13	14	18
	TIME	MIN	3	3	3	3	4	3	3	3	3	4
20000	FUEL	KG	88	91	95	99	113	101	104	109	113	130
	DISTANCE	NM	10	10	11	11	15	12	12	13	13	17
	TIME	MIN	2	3	3	3	3	3	3	3	3	4
19000	FUEL	KG	82	85	88	92	105	94	97	101	106	121
	DISTANCE	NM	9	10	10	11	13	11	11	12	12	16
	TIME	MIN	2	2	2	2	3	3	3	3	3	4
18000	FUEL	KG	76	79	82	86	97	87	91	94	98	112
	DISTANCE	NM	9	9	9	10	12	10	10	11	11	15
	TIME	MIN	2	2	2	2	3	2	3	3	3	3
17000	FUEL	KG	71	73	76	80	90	81	84	87	91	103
	DISTANCE	NM	8	8	9	9	12	9	10	10	11	13
	TIME	MIN	2	2	2	2	3	2	2	2	2	3
16000	FUEL	KG	65	68	71	74	83	75	78	81	84	95
	DISTANCE	NM	7	8	8	8	11	9	9	9	10	12
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
15000	FUEL	KG	61	63	65	68	76	69	72	75	78	88
	DISTANCE	NM	7	7	7	8	10	8	8	9	9	11
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
14000	FUEL	KG	56	58	60	63	70	64	66	69	72	80
	DISTANCE	NM	6	6	7	7	9	7	8	8	8	10
	TIME	MIN	2	2	2	2	2	2	2	2	2	2
13000	FUEL	KG	51	53	55	57	64	58	61	63	66	73
	DISTANCE	NM	6	6	6	7	8	7	7	7	8	10
	TIME	MIN	1	1	1	2	2	2	2	2	2	2
12000	FUEL	KG	47	48	50	52	58	53	55	57	60	67
	DISTANCE	NM	5	5	6	6	7	6	6	7	7	9
	TIME	MIN	1	1	1	1	2	2	2	2	2	2

ANTI ICE ON CORRECTIONS
FUEL

BELOW ISA
INCREASE 8%

ISA
INCREASE 8%

ABOVE ISA
INCREASE 15%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 9000 AND 10000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			9000 FT ISA + °C					10000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	130	136	141	147	171	146	151	157	165	192
	DISTANCE	NM	15	16	17	18	23	17	18	19	20	26
	TIME	MIN	4	4	4	4	5	4	4	4	5	6
21000	FUEL	KG	122	126	132	137	159	136	141	147	153	178
	DISTANCE	NM	14	15	15	16	21	16	17	18	19	24
	TIME	MIN	3	4	4	4	5	4	4	4	4	5
20000	FUEL	KG	113	118	123	128	147	127	131	137	143	165
	DISTANCE	NM	13	14	14	15	20	15	16	16	17	22
	TIME	MIN	3	3	3	4	4	4	4	4	4	5
19000	FUEL	KG	106	110	114	119	136	118	122	127	133	153
	DISTANCE	NM	12	13	13	14	18	14	15	15	16	21
	TIME	MIN	3	3	3	3	4	3	3	4	4	5
18000	FUEL	KG	98	102	106	111	126	109	114	118	123	141
	DISTANCE	NM	12	12	12	13	17	13	14	14	15	19
	TIME	MIN	3	3	3	3	4	3	3	3	3	4
17000	FUEL	KG	91	95	99	103	117	102	106	110	115	130
	DISTANCE	NM	11	11	12	12	16	12	13	13	14	18
	TIME	MIN	3	3	3	3	4	3	3	3	3	4
16000	FUEL	KG	84	88	91	95	108	94	98	102	106	120
	DISTANCE	NM	10	10	11	11	14	11	12	12	13	16
	TIME	MIN	2	2	3	3	3	3	3	3	3	4
15000	FUEL	KG	78	81	84	88	99	87	90	94	98	110
	DISTANCE	NM	9	9	10	10	13	10	11	11	12	15
	TIME	MIN	2	2	2	2	3	3	3	3	3	3
14000	FUEL	KG	72	75	77	81	91	80	83	86	90	101
	DISTANCE	NM	8	9	9	10	12	9	10	10	11	14
	TIME	MIN	2	2	2	2	3	2	2	2	2	3
13000	FUEL	KG	66	68	71	74	83	73	76	79	82	92
	DISTANCE	NM	8	8	8	9	11	9	9	9	10	12
	TIME	MIN	2	2	2	2	2	2	2	2	2	3
12000	FUEL	KG	60	62	65	67	75	67	69	72	75	84
	DISTANCE	NM	7	7	7	8	10	8	8	8	9	11
	TIME	MIN	2	2	2	2	2	2	2	2	2	3

ANTI ICE ON CORRECTIONS
FUEL

BELOW ISA
INCREASE 8%

ISA
INCREASE 8%

ABOVE ISA
INCREASE 15%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 11000 FT AND 12000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			11000 FT ISA + °C					12000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	161	168	174	182	214	178	185	193	202	240
	DISTANCE	NM	20	21	21	23	30	23	23	24	26	35
	TIME	MIN	5	5	5	5	7	5	5	6	6	8
21000	FUEL	KG	150	156	163	170	198	166	173	180	188	222
	DISTANCE	NM	18	19	20	21	28	21	22	23	24	32
	TIME	MIN	4	4	5	5	6	5	5	5	5	7
20000	FUEL	KG	140	146	151	158	184	155	161	167	175	205
	DISTANCE	NM	17	18	19	20	26	19	20	21	22	30
	TIME	MIN	4	4	4	4	6	5	5	5	5	6
19000	FUEL	KG	130	135	141	147	170	144	149	156	163	189
	DISTANCE	NM	16	17	17	18	24	18	19	20	21	27
	TIME	MIN	4	4	4	4	5	4	4	4	5	6
18000	FUEL	KG	121	126	131	137	157	134	139	144	151	175
	DISTANCE	NM	15	15	16	17	22	17	17	18	19	25
	TIME	MIN	4	4	4	4	5	4	4	4	4	5
17000	FUEL	KG	112	117	121	127	145	124	129	134	140	161
	DISTANCE	NM	14	14	15	16	20	16	16	17	18	23
	TIME	MIN	3	3	3	4	4	4	4	4	4	5
16000	FUEL	KG	104	108	112	117	133	114	119	124	129	148
	DISTANCE	NM	13	13	14	14	19	14	15	16	16	21
	TIME	MIN	3	3	3	3	4	3	3	4	4	5
15000	FUEL	KG	96	100	104	108	122	105	110	114	119	136
	DISTANCE	NM	12	12	13	13	17	13	14	14	15	19
	TIME	MIN	3	3	3	3	4	3	3	3	3	4
14000	FUEL	KG	88	92	95	99	112	97	101	105	109	124
	DISTANCE	NM	11	11	12	12	16	12	13	13	14	18
	TIME	MIN	3	3	3	3	3	3	3	3	3	4
13000	FUEL	KG	81	84	87	91	102	89	92	96	100	113
	DISTANCE	NM	10	10	11	11	14	11	11	12	13	16
	TIME	MIN	2	2	2	3	3	3	3	3	3	4
12000	FUEL	KG	73	76	79	83	93	81	84	87	91	103
	DISTANCE	NM	9	9	10	10	13	10	10	11	11	15
	TIME	MIN	2	2	2	2	3	2	2	2	3	3

ANTI ICE ON CORRECTIONS

FUEL

DISTANCE

TIME

BELOW ISA

INCREASE 9%

NA

NA

ISA

INCREASE 9%

INCREASE 10%

INCREASE 10%

ABOVE ISA

INCREASE 15%

INCREASE 20%

INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 13000 AND 14000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			13000 FT ISA + °C					14000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	197	205	213	223	269	216	224	234	245	299
	DISTANCE	NM	26	27	28	30	40	29	30	32	33	47
	TIME	MIN	6	6	6	6	9	7	7	7	7	10
21000	FUEL	KG	183	190	198	208	248	201	209	217	228	275
	DISTANCE	NM	24	25	26	27	37	27	28	29	31	43
	TIME	MIN	5	6	6	6	8	6	6	6	7	9
20000	FUEL	KG	170	177	184	193	228	186	194	202	211	253
	DISTANCE	NM	22	23	24	25	34	25	26	27	29	39
	TIME	MIN	5	5	5	6	7	6	6	6	6	8
19000	FUEL	KG	158	165	171	179	211	173	180	187	196	233
	DISTANCE	NM	21	21	22	24	31	23	24	25	27	36
	TIME	MIN	5	5	5	5	7	5	5	5	6	7
18000	FUEL	KG	147	153	159	166	194	160	167	174	182	215
	DISTANCE	NM	19	20	21	22	29	21	22	23	25	33
	TIME	MIN	4	4	5	5	6	5	5	5	5	7
17000	FUEL	KG	136	141	147	154	179	148	154	161	168	197
	DISTANCE	NM	18	18	19	20	27	20	21	22	23	30
	TIME	MIN	4	4	4	4	6	4	5	5	5	6
16000	FUEL	KG	126	131	136	142	164	137	143	148	155	181
	DISTANCE	NM	16	17	18	19	24	18	19	20	21	28
	TIME	MIN	4	4	4	4	5	4	4	4	4	6
15000	FUEL	KG	116	120	125	131	151	126	131	137	143	166
	DISTANCE	NM	15	16	16	17	22	17	17	18	19	25
	TIME	MIN	3	4	4	4	5	4	4	4	4	5
14000	FUEL	KG	106	111	115	120	138	116	121	125	131	151
	DISTANCE	NM	14	14	15	16	20	15	16	17	18	23
	TIME	MIN	3	3	3	3	4	3	4	4	4	5
13000	FUEL	KG	97	101	105	110	125	106	110	115	120	138
	DISTANCE	NM	12	13	14	14	19	14	15	15	16	21
	TIME	MIN	3	3	3	3	4	3	3	3	3	4
12000	FUEL	KG	89	92	96	100	114	96	100	104	109	125
	DISTANCE	NM	11	12	12	13	17	13	13	14	15	19
	TIME	MIN	3	3	3	3	4	3	3	3	3	4

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 9%
NA
NA

ISA
INCREASE 9%
INCREASE 10%
INCREASE 10%

ABOVE ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 15000 AND 16000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			15000 FT ISA + °C					16000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	236	245	255	268	332	256	266	277	292	367
	DISTANCE	NM	33	34	35	38	53	37	38	40	42	61
	TIME	MIN	7	7	8	8	11	8	8	8	9	12
21000	FUEL	KG	219	228	237	249	304	237	247	257	270	336
	DISTANCE	NM	30	32	33	35	49	34	35	37	39	56
	TIME	MIN	7	7	7	7	10	7	7	8	8	11
20000	FUEL	KG	203	211	220	231	280	220	229	238	250	307
	DISTANCE	NM	28	29	30	32	45	31	33	34	36	51
	TIME	MIN	6	6	6	7	9	7	7	7	7	10
19000	FUEL	KG	188	196	204	214	257	204	212	221	232	282
	DISTANCE	NM	26	27	28	30	41	29	30	31	33	47
	TIME	MIN	6	6	6	6	8	6	6	7	7	9
18000	FUEL	KG	174	181	189	198	236	189	196	204	214	258
	DISTANCE	NM	24	25	26	28	38	27	28	29	31	43
	TIME	MIN	5	5	6	6	8	6	6	6	6	9
17000	FUEL	KG	161	168	175	183	217	174	181	189	198	237
	DISTANCE	NM	22	23	24	26	34	25	26	27	28	39
	TIME	MIN	5	5	5	5	7	5	5	6	6	8
16000	FUEL	KG	149	155	161	169	198	161	167	174	182	217
	DISTANCE	NM	20	21	22	23	32	23	24	25	26	36
	TIME	MIN	5	5	5	5	6	5	5	5	5	7
15000	FUEL	KG	137	142	148	155	181	148	154	160	168	198
	DISTANCE	NM	19	20	20	22	29	21	22	23	24	32
	TIME	MIN	4	4	4	5	6	5	5	5	5	7
14000	FUEL	KG	126	131	136	142	166	136	141	147	154	180
	DISTANCE	NM	17	18	19	20	26	19	20	21	22	29
	TIME	MIN	4	4	4	4	5	4	4	4	5	6
13000	FUEL	KG	115	119	124	130	150	124	129	134	140	164
	DISTANCE	NM	16	16	17	18	24	17	18	19	20	27
	TIME	MIN	3	4	4	4	5	4	4	4	4	5
12000	FUEL	KG	104	109	113	118	136	112	117	122	127	148
	DISTANCE	NM	14	15	15	16	21	16	16	17	18	24
	TIME	MIN	3	3	3	3	4	3	4	4	4	5

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 9%
NA
NA

ISA
INCREASE 9%
INCREASE 10%
INCREASE 10%

ABOVE ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 17000 AND 18000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			17000 FT ISA + °C					18000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	277	288	300	316	404	296	308	321	339	439
	DISTANCE	NM	41	42	44	47	70	44	46	48	52	78
	TIME	MIN	9	9	9	9	14	9	10	10	10	15
21000	FUEL	KG	257	267	278	293	369	274	285	297	314	399
	DISTANCE	NM	38	39	41	44	63	41	43	45	48	70
	TIME	MIN	8	8	8	9	12	9	9	9	10	14
20000	FUEL	KG	238	247	258	271	337	254	264	275	290	364
	DISTANCE	NM	35	36	38	40	58	38	39	41	44	64
	TIME	MIN	7	8	8	8	11	8	8	8	9	12
19000	FUEL	KG	220	229	238	251	308	234	244	254	268	332
	DISTANCE	NM	32	33	35	37	53	35	36	38	41	58
	TIME	MIN	7	7	7	8	10	7	8	8	8	11
18000	FUEL	KG	203	212	220	232	282	217	225	235	247	303
	DISTANCE	NM	30	31	32	34	48	32	34	35	37	53
	TIME	MIN	6	6	7	7	9	7	7	7	7	10
17000	FUEL	KG	188	195	203	214	258	200	208	217	228	277
	DISTANCE	NM	27	28	30	32	44	30	31	32	34	48
	TIME	MIN	6	6	6	6	9	6	6	7	7	9
16000	FUEL	KG	173	180	187	197	236	184	192	199	210	253
	DISTANCE	NM	25	26	27	29	40	27	28	30	32	44
	TIME	MIN	5	6	6	6	8	6	6	6	6	9
15000	FUEL	KG	159	165	172	181	215	169	176	183	192	230
	DISTANCE	NM	23	24	25	27	36	25	26	27	29	40
	TIME	MIN	5	5	5	5	7	5	5	6	6	8
14000	FUEL	KG	146	152	158	165	195	155	161	168	176	209
	DISTANCE	NM	21	22	23	24	33	23	24	25	26	36
	TIME	MIN	5	5	5	5	7	5	5	5	5	7
13000	FUEL	KG	133	138	144	151	177	141	147	153	160	190
	DISTANCE	NM	19	20	21	22	30	21	22	23	24	33
	TIME	MIN	4	4	4	5	6	4	5	5	5	6
12000	FUEL	KG	121	126	131	137	160	128	133	139	146	171
	DISTANCE	NM	17	18	19	20	27	19	20	20	22	29
	TIME	MIN	4	4	4	4	5	4	4	4	4	6
ANTI ICE ON CORRECTIONS			BELOW ISA					ISA				
FUEL			INCREASE 10%					INCREASE 10%				
DISTANCE			NA					INCREASE 10%				
TIME			NA					INCREASE 10%				
								ABOVE ISA				
								INCREASE 20%				
								INCREASE 20%				
								INCREASE 20%				

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 19000 AND 20000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			19000 FT ISA + °C					20000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	313	326	340	360	469	330	343	358	379	496
	DISTANCE	NM	48	50	52	56	85	51	53	56	60	91
	TIME	MIN	10	10	10	11	16	11	11	11	12	17
21000	FUEL	KG	290	301	314	332	426	304	317	330	350	450
	DISTANCE	NM	44	46	48	52	77	47	49	51	55	82
	TIME	MIN	9	9	10	10	15	10	10	10	11	16
20000	FUEL	KG	268	279	290	307	387	281	293	305	323	409
	DISTANCE	NM	41	42	44	48	69	44	45	47	51	74
	TIME	MIN	9	9	9	9	13	9	9	9	10	14
19000	FUEL	KG	247	258	268	283	353	260	271	282	298	373
	DISTANCE	NM	38	39	41	44	63	40	42	44	47	68
	TIME	MIN	8	8	8	9	12	8	8	9	9	13
18000	FUEL	KG	228	238	248	261	322	240	250	260	274	339
	DISTANCE	NM	35	36	38	40	57	37	38	40	43	61
	TIME	MIN	7	7	8	8	11	8	8	8	8	12
17000	FUEL	KG	211	219	228	241	294	221	230	240	253	309
	DISTANCE	NM	32	33	35	37	52	34	35	37	40	56
	TIME	MIN	7	7	7	7	10	7	7	7	8	11
16000	FUEL	KG	194	202	210	221	268	203	212	220	232	282
	DISTANCE	NM	29	30	32	34	47	31	32	34	36	51
	TIME	MIN	6	6	6	7	9	6	7	7	7	10
15000	FUEL	KG	178	185	193	203	244	186	194	202	213	256
	DISTANCE	NM	27	28	29	31	43	29	30	31	33	46
	TIME	MIN	6	6	6	6	8	6	6	6	7	9
14000	FUEL	KG	163	170	177	186	221	171	178	185	195	233
	DISTANCE	NM	24	25	27	28	39	26	27	28	30	41
	TIME	MIN	5	5	5	6	7	5	6	6	6	8
13000	FUEL	KG	148	155	161	169	200	155	162	169	177	210
	DISTANCE	NM	22	23	24	26	35	24	25	26	27	37
	TIME	MIN	5	5	5	5	7	5	5	5	5	7
12000	FUEL	KG	135	140	146	153	181	141	147	153	161	190
	DISTANCE	NM	20	21	22	23	32	21	22	23	25	34
	TIME	MIN	4	4	4	5	6	4	5	5	5	6

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 10%
NA
NA

ISA
INCREASE 10%
INCREASE 10%
INCREASE 10%

ABOVE ISA
INCREASE 20%
INCREASE 20%
INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 21000 AND 22000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			21000 FT ISA + °C					22000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	346	360	375	398	523	362	377	392	417	551
	DISTANCE	NM	54	57	59	64	97	58	60	63	68	104
	TIME	MIN	11	11	12	12	18	12	12	12	13	19
21000	FUEL	KG	319	332	346	367	474	334	347	362	384	498
	DISTANCE	NM	50	52	55	59	88	53	55	58	63	94
	TIME	MIN	10	11	11	11	16	11	11	11	12	17
20000	FUEL	KG	295	307	320	339	430	308	321	334	354	452
	DISTANCE	NM	46	48	50	54	79	49	51	53	58	85
	TIME	MIN	10	10	10	10	15	10	10	10	11	16
19000	FUEL	KG	272	283	295	312	391	284	296	308	326	411
	DISTANCE	NM	43	44	46	50	72	45	47	49	53	77
	TIME	MIN	9	9	9	10	14	9	9	10	10	14
18000	FUEL	KG	251	261	272	288	356	262	273	284	300	373
	DISTANCE	NM	39	41	43	46	65	41	43	45	49	69
	TIME	MIN	8	8	8	9	12	8	9	9	9	13
17000	FUEL	KG	231	241	251	265	325	241	251	262	276	340
	DISTANCE	NM	36	37	39	42	59	38	40	41	45	63
	TIME	MIN	7	8	8	8	11	8	8	8	9	12
16000	FUEL	KG	212	221	230	243	295	222	231	240	254	309
	DISTANCE	NM	33	34	36	39	54	35	36	38	41	57
	TIME	MIN	7	7	7	8	10	7	7	8	8	11
15000	FUEL	KG	195	203	211	223	269	203	212	220	232	281
	DISTANCE	NM	30	31	33	35	49	32	33	35	37	52
	TIME	MIN	6	6	7	7	9	7	7	7	7	10
14000	FUEL	KG	178	186	193	204	244	186	193	201	212	254
	DISTANCE	NM	28	29	30	32	44	29	30	32	34	47
	TIME	MIN	6	6	6	6	8	6	6	6	7	9
13000	FUEL	KG	162	169	176	185	220	169	176	183	193	230
	DISTANCE	NM	25	26	27	29	40	26	28	29	31	42
	TIME	MIN	5	5	5	6	8	5	6	6	6	8
12000	FUEL	KG	147	153	160	168	198	153	160	166	175	207
	DISTANCE	NM	23	24	25	26	36	24	25	26	28	38
	TIME	MIN	5	5	5	5	7	5	5	5	5	7

ANTI ICE ON CORRECTIONS

FUEL

DISTANCE

TIME

BELOW ISA
INCREASE 10%

NA

NA

ISA
INCREASE 10%

INCREASE 10%

INCREASE 10%

ABOVE ISA
INCREASE 20%

INCREASE 20%

INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 23000 AND 24000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			23000 FT ISA + °C					24000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	378	393	410	437	579	394	410	428	456	607
	DISTANCE	NM	61	64	67	72	111	65	67	70	77	118
	TIME	MIN	12	13	13	14	21	13	13	14	15	22
21000	FUEL	KG	348	363	378	402	523	363	378	394	420	548
	DISTANCE	NM	56	59	61	66	100	59	62	65	70	106
	TIME	MIN	11	12	12	13	18	12	12	13	13	20
20000	FUEL	KG	321	334	349	370	473	334	348	363	386	495
	DISTANCE	NM	52	54	56	61	90	55	57	59	64	96
	TIME	MIN	11	11	11	12	17	11	11	12	12	18
19000	FUEL	KG	296	308	321	341	430	308	321	335	355	449
	DISTANCE	NM	48	50	52	56	81	50	52	55	59	86
	TIME	MIN	10	10	10	11	15	10	10	11	11	16
18000	FUEL	KG	273	284	296	313	391	284	296	308	327	408
	DISTANCE	NM	44	46	48	51	74	46	48	50	54	78
	TIME	MIN	9	9	9	10	14	9	10	10	10	14
17000	FUEL	KG	251	261	272	288	355	261	272	283	300	370
	DISTANCE	NM	40	42	44	47	67	42	44	46	50	71
	TIME	MIN	8	8	9	9	12	9	9	9	10	13
16000	FUEL	KG	231	240	250	264	323	240	250	260	275	336
	DISTANCE	NM	37	38	40	43	60	39	40	42	45	64
	TIME	MIN	8	8	8	8	11	8	8	8	9	12
15000	FUEL	KG	211	220	229	242	293	220	229	238	252	305
	DISTANCE	NM	34	35	37	39	55	35	37	38	42	58
	TIME	MIN	7	7	7	8	10	7	7	8	8	11
14000	FUEL	KG	193	201	210	221	265	201	209	218	230	276
	DISTANCE	NM	31	32	33	36	49	32	34	35	38	52
	TIME	MIN	6	6	7	7	9	7	7	7	7	10
13000	FUEL	KG	176	183	191	201	240	182	190	198	209	249
	DISTANCE	NM	28	29	30	33	44	29	30	32	34	47
	TIME	MIN	6	6	6	6	8	6	6	6	7	9
12000	FUEL	KG	159	166	173	182	216	165	172	179	189	224
	DISTANCE	NM	25	26	27	29	40	26	28	29	31	42
	TIME	MIN	5	5	5	6	8	5	6	6	6	8

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 10%
NA
NA

ISA
INCREASE 10%
INCREASE 10%
INCREASE 10%

ABOVE ISA
INCREASE 20%
INCREASE 20%
INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 25000 AND 26000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			25000 FT ISA + °C					26000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	410	428	446	476	636	427	445	464	496	664
	DISTANCE	NM	68	71	74	81	126	72	75	78	86	133
	TIME	MIN	14	14	14	15	23	14	15	15	16	24
21000	FUEL	KG	378	394	410	438	573	393	410	427	455	598
	DISTANCE	NM	63	65	68	74	113	66	69	72	78	119
	TIME	MIN	13	13	13	14	21	13	14	14	15	22
20000	FUEL	KG	348	363	378	402	518	362	377	393	418	539
	DISTANCE	NM	58	60	63	68	101	61	63	66	72	107
	TIME	MIN	12	12	12	13	19	12	12	13	14	20
19000	FUEL	KG	320	334	348	370	469	333	347	362	384	488
	DISTANCE	NM	53	55	57	62	91	56	58	61	66	96
	TIME	MIN	11	11	11	12	17	11	11	12	12	18
18000	FUEL	KG	295	307	320	340	425	306	319	332	353	442
	DISTANCE	NM	48	51	53	57	82	51	53	56	60	87
	TIME	MIN	10	10	10	11	15	10	10	11	11	16
17000	FUEL	KG	271	282	294	312	386	281	293	305	324	400
	DISTANCE	NM	44	46	48	52	75	47	49	51	55	78
	TIME	MIN	9	9	9	10	14	9	10	10	10	14
16000	FUEL	KG	249	259	270	286	350	258	269	280	296	363
	DISTANCE	NM	41	42	44	48	67	43	45	47	50	71
	TIME	MIN	8	8	9	9	13	9	9	9	10	13
15000	FUEL	KG	228	237	247	261	317	236	246	256	271	329
	DISTANCE	NM	37	39	40	44	61	39	41	42	46	64
	TIME	MIN	8	8	8	8	11	8	8	8	9	12
14000	FUEL	KG	208	217	226	238	287	215	224	234	247	297
	DISTANCE	NM	34	35	37	40	55	36	37	39	42	58
	TIME	MIN	7	7	7	8	10	7	7	8	8	11
13000	FUEL	KG	189	197	205	217	259	196	204	213	224	268
	DISTANCE	NM	31	32	33	36	49	32	34	35	38	52
	TIME	MIN	6	6	7	7	9	7	7	7	7	10
12000	FUEL	KG	171	179	186	196	233	177	185	193	203	241
	DISTANCE	NM	28	29	30	32	44	29	30	32	34	46
	TIME	MIN	6	6	6	6	8	6	6	6	7	9
ANTI ICE ON CORRECTIONS			BELOW ISA					ISA				
FUEL			INCREASE 10%					INCREASE 10%				
DISTANCE			NA					INCREASE 10%				
TIME			NA					INCREASE 10%				
								ABOVE ISA				
								INCREASE 20%				
								INCREASE 20%				
								INCREASE 20%				

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 27000 AND 28000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			27000 FT ISA + °C					28000 FT ISA + °C				
			-20	-10	0	10	20	-20	-10	0	10	20
22000	FUEL	KG	445	463	483	516	692	463	482	503	536	719
	DISTANCE	NM	76	79	83	90	140	80	84	88	95	148
	TIME	MIN	15	16	16	17	26	16	16	17	18	27
21000	FUEL	KG	409	426	444	473	622	425	443	462	492	646
	DISTANCE	NM	70	73	76	83	126	74	77	80	87	132
	TIME	MIN	14	14	15	16	23	15	15	15	16	24
20000	FUEL	KG	376	392	408	434	561	390	407	424	451	582
	DISTANCE	NM	64	67	70	76	113	67	70	73	80	118
	TIME	MIN	13	13	13	14	21	13	14	14	15	22
19000	FUEL	KG	345	360	375	399	507	358	374	390	414	525
	DISTANCE	NM	59	61	64	69	101	62	64	67	73	106
	TIME	MIN	12	12	12	13	19	12	13	13	14	19
18000	FUEL	KG	317	331	345	366	458	329	343	358	379	475
	DISTANCE	NM	54	56	58	63	91	56	59	62	66	96
	TIME	MIN	11	11	11	12	17	11	12	12	13	18
17000	FUEL	KG	291	304	317	335	415	302	315	328	347	430
	DISTANCE	NM	49	51	53	58	82	52	54	56	61	86
	TIME	MIN	10	10	10	11	15	10	11	11	11	16
16000	FUEL	KG	267	278	290	307	376	276	288	300	318	389
	DISTANCE	NM	45	47	49	53	74	47	49	51	55	78
	TIME	MIN	9	9	9	10	14	9	10	10	10	14
15000	FUEL	KG	244	255	265	281	340	253	263	275	290	352
	DISTANCE	NM	41	43	45	48	67	43	45	47	50	70
	TIME	MIN	8	8	9	9	12	9	9	9	10	13
14000	FUEL	KG	223	232	242	256	308	230	240	250	264	318
	DISTANCE	NM	37	39	41	44	60	39	41	43	46	63
	TIME	MIN	8	8	8	8	11	8	8	8	9	12
13000	FUEL	KG	203	211	220	232	277	209	218	227	240	286
	DISTANCE	NM	34	35	37	40	54	35	37	39	41	57
	TIME	MIN	7	7	7	8	10	7	7	7	8	10
12000	FUEL	KG	183	191	199	210	249	189	197	206	217	257
	DISTANCE	NM	30	32	33	36	49	32	33	35	37	51
	TIME	MIN	6	6	6	7	9	6	7	7	7	9

ANTI ICE ON CORRECTIONS

FUEL

DISTANCE

TIME

BELOW ISA

INCREASE 10%

NA

NA

ISA

INCREASE 10%

INCREASE 10%

INCREASE 10%

ABOVE ISA

INCREASE 20%

INCREASE 20%

INCREASE 20%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 29000 AND 30000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			29000 FT ISA + °C					30000 FT ISA + °C				
			-15	-10	0	10	20	-15	-10	0	10	20
22000	FUEL	KG	492	511	532	569	748	511	540	562	602	778
	DISTANCE	NM	87	89	93	101	156	92	94	98	107	164
	TIME	MIN	17	17	18	19	28	18	18	19	20	30
21000	FUEL	KG	451	468	487	520	670	468	493	513	549	696
	DISTANCE	NM	79	81	85	92	139	84	86	89	97	146
	TIME	MIN	16	16	16	17	25	16	17	17	18	26
20000	FUEL	KG	414	429	447	476	603	429	452	470	502	625
	DISTANCE	NM	73	74	77	84	124	76	78	82	88	130
	TIME	MIN	14	14	15	16	23	15	15	16	17	24
19000	FUEL	KG	380	394	410	436	544	393	414	430	459	563
	DISTANCE	NM	66	68	71	77	111	70	71	75	81	117
	TIME	MIN	13	13	14	14	20	14	14	14	15	21
18000	FUEL	KG	348	361	376	399	492	360	379	394	420	509
	DISTANCE	NM	61	62	65	70	100	64	65	68	74	105
	TIME	MIN	12	12	12	13	18	13	13	13	14	19
17000	FUEL	KG	319	331	344	365	445	330	347	361	384	459
	DISTANCE	NM	55	57	59	64	90	58	60	62	67	94
	TIME	MIN	11	11	11	12	17	11	12	12	13	17
16000	FUEL	KG	292	302	315	334	402	302	317	330	350	415
	DISTANCE	NM	51	52	54	58	81	53	54	57	61	85
	TIME	MIN	10	10	10	11	15	10	11	11	11	16
15000	FUEL	KG	267	276	288	304	363	275	289	301	319	375
	DISTANCE	NM	46	47	49	53	73	48	49	52	55	76
	TIME	MIN	9	9	9	10	13	10	10	10	10	14
14000	FUEL	KG	243	252	262	277	328	251	263	274	290	338
	DISTANCE	NM	42	43	45	48	66	44	45	47	50	69
	TIME	MIN	8	8	9	9	12	9	9	9	9	13
13000	FUEL	KG	221	228	238	251	295	228	238	248	263	304
	DISTANCE	NM	38	39	40	43	59	40	40	42	45	62
	TIME	MIN	8	8	8	8	11	8	8	8	9	11
12000	FUEL	KG	199	206	215	227	265	206	215	224	237	273
	DISTANCE	NM	34	35	36	39	53	36	36	38	41	55
	TIME	MIN	7	7	7	7	10	7	7	7	8	10

ANTI ICE ON CORRECTIONS

FUEL

DISTANCE

TIME

BELOW ISA

INCREASE 15%

INCREASE 20%

INCREASE 20%

ISA

INCREASE 15%

INCREASE 20%

INCREASE 20%

ABOVE ISA

INCREASE 30%

INCREASE 30%

INCREASE 30%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 31000 AND 32000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			31000 FT ISA + °C					32000 FT ISA + °C				
			-15	-10	0	10	20	-15	-10	0	10	20
22000	FUEL	KG	531	560	583	625	811	551	581	604	649	847
	DISTANCE	NM	97	99	103	113	174	102	104	109	119	184
	TIME	MIN	19	19	20	21	31	20	20	21	22	33
21000	FUEL	KG	485	511	532	569	723	503	529	550	590	753
	DISTANCE	NM	88	90	94	102	154	93	95	99	108	163
	TIME	MIN	17	17	18	19	28	18	18	19	20	29
20000	FUEL	KG	444	467	486	519	648	459	483	503	537	673
	DISTANCE	NM	80	82	86	93	137	84	86	90	98	144
	TIME	MIN	16	16	16	17	25	16	17	17	18	26
19000	FUEL	KG	407	427	445	474	583	420	441	459	490	604
	DISTANCE	NM	73	75	78	85	123	77	78	82	89	129
	TIME	MIN	14	15	15	16	22	15	15	16	17	23
18000	FUEL	KG	372	391	407	433	526	384	403	420	447	544
	DISTANCE	NM	67	68	71	77	110	70	71	75	81	115
	TIME	MIN	13	13	14	14	20	14	14	14	15	21
17000	FUEL	KG	341	358	372	396	475	351	369	384	408	490
	DISTANCE	NM	61	62	65	70	99	64	65	68	73	104
	TIME	MIN	12	12	12	13	18	13	13	13	14	19
16000	FUEL	KG	311	327	340	361	429	321	336	350	372	442
	DISTANCE	NM	55	57	59	64	89	58	59	62	67	93
	TIME	MIN	11	11	11	12	16	11	12	12	12	17
15000	FUEL	KG	284	298	310	329	387	293	307	319	339	399
	DISTANCE	NM	50	52	54	58	80	53	54	56	61	84
	TIME	MIN	10	10	10	11	15	10	11	11	11	15
14000	FUEL	KG	258	271	282	299	349	266	279	290	307	359
	DISTANCE	NM	46	47	49	53	72	48	49	51	55	75
	TIME	MIN	9	9	9	10	13	9	10	10	10	14
13000	FUEL	KG	234	245	256	271	313	241	252	263	278	323
	DISTANCE	NM	41	42	44	47	64	43	44	46	49	67
	TIME	MIN	8	8	8	9	12	9	9	9	9	12
12000	FUEL	KG	212	222	231	244	281	218	228	237	251	289
	DISTANCE	NM	37	38	40	43	57	39	40	41	44	60
	TIME	MIN	7	7	8	8	11	8	8	8	8	11

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

ABOVE ISA
INCREASE 30%
INCREASE 30%
INCREASE 30%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 33000 AND 34000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			33000 FT ISA + °C					34000 FT ISA + °C				
			-15	-10	0	10	20	-10	-5	0	10	20
22000	FUEL	KG	572	602	626	675	888	623	639	634	681	949
	DISTANCE	NM	107	110	115	126	197	117	119	121	133	211
	TIME	MIN	21	21	22	23	35	23	23	23	25	38
21000	FUEL	KG	521	547	570	612	785	564	579	575	616	832
	DISTANCE	NM	97	100	104	114	172	105	107	109	119	183
	TIME	MIN	19	19	20	21	31	20	21	21	22	33
20000	FUEL	KG	475	499	519	556	699	513	526	524	559	737
	DISTANCE	NM	88	90	94	103	153	95	97	99	108	161
	TIME	MIN	17	17	18	19	28	18	19	19	20	29
19000	FUEL	KG	434	455	474	506	626	468	480	478	509	657
	DISTANCE	NM	80	82	86	93	136	86	88	90	98	143
	TIME	MIN	16	16	16	17	25	17	17	17	18	26
18000	FUEL	KG	397	416	433	462	563	426	437	436	463	589
	DISTANCE	NM	73	75	78	85	121	78	80	81	88	127
	TIME	MIN	14	14	15	16	22	15	15	15	16	23
17000	FUEL	KG	362	380	395	421	507	389	399	398	422	529
	DISTANCE	NM	66	68	71	77	109	71	73	74	80	114
	TIME	MIN	13	13	14	14	20	14	14	14	15	21
16000	FUEL	KG	331	346	361	383	456	354	363	363	384	476
	DISTANCE	NM	60	62	64	70	97	65	66	67	73	102
	TIME	MIN	12	12	12	13	18	13	13	13	14	18
15000	FUEL	KG	301	315	328	349	411	323	331	330	350	428
	DISTANCE	NM	55	56	59	63	87	59	60	61	66	91
	TIME	MIN	11	11	11	12	16	11	12	12	12	17
14000	FUEL	KG	274	286	298	316	370	293	300	300	317	384
	DISTANCE	NM	50	51	53	57	78	53	54	55	60	82
	TIME	MIN	10	10	10	11	14	10	10	11	11	15
13000	FUEL	KG	248	259	270	286	332	265	272	271	287	345
	DISTANCE	NM	45	46	48	52	70	48	49	50	54	73
	TIME	MIN	9	9	9	10	13	9	9	10	10	13
12000	FUEL	KG	224	234	244	258	297	239	245	245	258	308
	DISTANCE	NM	40	41	43	46	62	43	44	45	48	65
	TIME	MIN	8	8	8	9	11	8	8	9	9	12

ANTI ICE ON CORRECTIONS	BELOW ISA	ISA	ABOVE ISA
FUEL	INCREASE 15%	INCREASE 15%	INCREASE 30%
DISTANCE	INCREASE 20%	INCREASE 20%	INCREASE 30%
TIME	INCREASE 20%	INCREASE 20%	INCREASE 30%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 35000 AND 36000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT

CRUISE CONFIGURATION

BLEED OPEN

WEIGHT KG			35000 FT ISA + °C					36000 FT ISA + °C				
			-10	-5	0	10	20	-10	-5	0	10	20
22000	FUEL	KG	650	666	661	712	1018	681	697	694	748	1077
	DISTANCE	NM	124	127	129	142	227	133	136	138	153	246
	TIME	MIN	24	24	24	26	41	26	26	26	28	44
21000	FUEL	KG	586	601	598	641	883	611	626	623	669	925
	DISTANCE	NM	111	114	115	127	195	118	121	123	135	209
	TIME	MIN	21	22	22	23	35	23	23	23	25	37
20000	FUEL	KG	532	545	543	580	777	552	566	564	603	809
	DISTANCE	NM	100	102	104	114	170	106	108	110	121	181
	TIME	MIN	19	20	20	21	31	20	21	21	22	33
19000	FUEL	KG	483	496	494	527	690	500	513	511	546	715
	DISTANCE	NM	91	93	94	103	150	96	98	99	108	158
	TIME	MIN	18	18	18	19	27	18	19	19	20	29
18000	FUEL	KG	440	451	450	479	616	454	466	465	495	636
	DISTANCE	NM	82	84	85	93	133	86	88	90	98	140
	TIME	MIN	16	16	16	17	24	17	17	17	18	25
17000	FUEL	KG	401	411	410	436	552	413	424	423	449	569
	DISTANCE	NM	75	76	77	84	119	78	80	81	88	124
	TIME	MIN	14	15	15	16	22	15	15	15	16	23
16000	FUEL	KG	365	374	373	396	495	376	385	385	408	510
	DISTANCE	NM	68	69	70	76	106	71	72	73	80	111
	TIME	MIN	13	13	13	14	19	14	14	14	15	20
15000	FUEL	KG	332	340	340	360	445	341	350	350	370	457
	DISTANCE	NM	61	62	64	69	95	64	65	66	72	99
	TIME	MIN	12	12	12	13	17	12	13	13	13	18
14000	FUEL	KG	301	308	308	326	399	309	317	317	335	410
	DISTANCE	NM	55	56	57	62	85	58	59	60	65	88
	TIME	MIN	11	11	11	12	15	11	11	11	12	16
13000	FUEL	KG	272	279	279	295	358	279	286	287	303	367
	DISTANCE	NM	50	51	52	56	76	52	53	54	58	79
	TIME	MIN	10	10	10	10	14	10	10	10	11	14
12000	FUEL	KG	245	251	251	265	319	252	258	258	273	328
	DISTANCE	NM	45	46	46	50	67	47	48	48	52	70
	TIME	MIN	9	9	9	9	12	9	9	9	10	13

ANTI ICE ON CORRECTIONS
FUEL
DISTANCE
TIME

BELOW ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

ISA
INCREASE 15%
INCREASE 20%
INCREASE 20%

ABOVE ISA
INCREASE 30%
INCREASE 30%
INCREASE 30%

CLIMB PLANNING - ALL ENGINES OPERATING

AE3007A1 ENGINES

ALTITUDE: SEA LEVEL TO 37000 FT

SPEED SCHEDULE : 240 KIAS UP TO 10000 FT, INCREASING LINEARLY TO 270 KIAS AT 12000 FT,
MAINTAINING 270 KIAS UP TO 17400 FT AND M = 0.56 ABOVE 17400 FT
CRUISE CONFIGURATION
BLEED OPEN

WEIGHT KG			ISA + °C				
			-10	-5	0	10	20
22000	FUEL	KG	722	739	736	793	1164
	DISTANCE	NM	146	148	151	166	275
	TIME	MIN	28	28	28	31	49
21000	FUEL	KG	641	657	655	703	978
	DISTANCE	NM	128	130	132	145	226
	TIME	MIN	25	25	25	27	41
20000	FUEL	KG	576	590	588	629	846
	DISTANCE	NM	113	116	117	128	193
	TIME	MIN	22	22	22	24	35
19000	FUEL	KG	519	532	531	567	744
	DISTANCE	NM	101	103	105	115	168
	TIME	MIN	20	20	20	21	30
18000	FUEL	KG	470	482	482	513	659
	DISTANCE	NM	91	93	95	103	148
	TIME	MIN	18	18	18	19	27
17000	FUEL	KG	427	437	437	464	588
	DISTANCE	NM	82	84	85	93	131
	TIME	MIN	16	16	16	17	24
16000	FUEL	KG	387	397	397	421	525
	DISTANCE	NM	74	76	77	83	116
	TIME	MIN	14	15	15	16	21
15000	FUEL	KG	351	360	360	381	471
	DISTANCE	NM	67	68	70	75	104
	TIME	MIN	13	13	13	14	19
14000	FUEL	KG	318	326	326	345	421
	DISTANCE	NM	60	62	63	68	92
	TIME	MIN	12	12	12	13	17
13000	FUEL	KG	287	294	295	311	377
	DISTANCE	NM	54	55	56	61	82
	TIME	MIN	11	11	11	11	15
12000	FUEL	KG	258	265	265	280	336
	DISTANCE	NM	49	50	50	54	73
	TIME	MIN	9	10	10	10	13

ANTI ICE ON CORRECTIONS	BELOW ISA	ISA	ABOVE ISA
FUEL	INCREASE 15%	INCREASE 15%	INCREASE 30%
DISTANCE	INCREASE 20%	INCREASE 20%	INCREASE 30%
TIME	INCREASE 20%	INCREASE 20%	INCREASE 30%