

Safety Regulation Group



CAP 402

Commercial Pilot's Licence Examination

Flight Planning Data

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Enquiries regarding the content of this publication should be addressed to:
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Table 1 Fuel flow against true air speed at different flight levels

Flight Level	Temperature Deviation	TAS kt	Fuel Flow kg/hr at varying weights (kg x 1000)										
			Wt	133	126	119	112	105	98	91	84	78	
300	-20°C to -11°C	474	F/F	7700	7500	7300	7100	6900	6700	6500	6400	6300	
			Wt	133	126	118	111	104	97	90	83		
	-10°C to -1°C	486	F/F	7900	7700	7400	7200	7000	6800	6700	6500		
			Wt	133	125	118	110	103	96	89	82		
	0 to +9°C	497	F/F	8100	7800	7600	7400	7200	7000	6800	6700		
			Wt	133	125	117	110	103	96	89	82		
	+10°C to +14°C	504	F/F	8200	7900	7700	7400	7200	7100	6900	6800		
			Wt	133	126	119	112	105	98	92	86	70	
310	-20°C to -11°C	472	F/F	7600	7300	7100	6900	6700	6500	6300	6200	6100	
			Wt	133	126	119	112	105	98	91	85		
	-10°C to -1°C	484	F/F	7800	7500	7300	7000	6800	6700	6500	6300		
			Wt	133	125	118	111	104	97	90	84		
	0 to +9°C	494	F/F	7900	7700	7400	7200	7000	6800	6600	6500		
			Wt	133	125	118	110	103	96	90	83		
	+10°C + 14°C	502	F/F	8100	7800	7500	7300	7100	6900	6700	6600		
			Wt	134	126	119	113	106	99	93	87	81	
320	-20°C to -11°C	470	F/F	7400	7200	6900	6700	6500	6300	6100	6000	5900	
			Wt	133	126	119	112	105	99	92	86	80	
	-10°C to -1°C	482	F/F	7600	7300	7100	6900	6700	6500	6300	6100	6000	
			Wt	133	126	119	112	105	98	91	85		
	0 to +9°C	492	F/F	7800	7500	7200	7000	6800	6600	6400	6300		
			Wt	133	126	118	111	104	97	91	84		
	to +14°C	501	F/F	7900	7600	7300	7100	6900	6700	6500	6300		
			Wt	133	126	118	111	104	97	91	84		

Jet Standard Atmosphere	
Press. Ht. 1000 ft.	Stand. Temp. °C
0	+15
2	+11
4	+ 7
6	+ 3
8	- 1
10	- 5
12	- 9
14	-13
16	-17
18	-21
20	-25
22	-29
24	-33
26	-37
28	-41
30	-45
32	-49
34	-53
36	-57
38	-61
40	-65
42	-69

Table 1 (CONT.)

Flight Level	Temperature Deviation	TAS kt	Fuel Flow kg/hr at varying weights (kg x 1000)										
			Wt	134	127	120	113	106	100	94	88	82	
330	-20°C to -11°C	468	F/F	7300	7100	6800	6600	6300	6200	6000	5800	5700	
	-10°C to -1°C	479	Wt	134	126	119	112	106	99	93	87	81	
			F/F	7500	7200	6900	6700	6500	6300	6100	6000	5800	
	0 to +9°C	490	Wt	133	126	119	112	105	98	92	86	80	
F/F			7700	7400	7100	6800	6600	6400	6200	6100	5900		
+10°C to +14°C	498	Wt		126	118	111	104	98	91	85	79		
		F/F		7500	7200	6900	6700	6500	6300	6200	6000		
340	-20°C to -11°C	466	F/F	7300	6900	6600	6400	6200	6000	5800	5700	5500	
	-10°C to -1°C	477	Wt	134	127	120	113	106	100	94	88	82	
			F/F	7400	7100	6800	6600	6300	6100	5900	5800	5700	
	0 to +9°C	488	Wt	133	126	119	112	106	99	93	87	81	
F/F			7600	7300	6900	6700	6400	6200	6100	5900	5800		
+10°C to +14°C	496	Wt		126	119	112	105	98	92	86	80		
		F/F		7300	7000	6800	6500	6300	6100	6000	5800		
350	-20°C to -11°C	463	F/F		6900	6600	6300	6100	5900	5700	5500	5400	5300
	-10°C to -1°C	475	Wt		127	120	113	107	101	95	89	84	78
			F/F		7000	6700	6500	6200	6000	5800	5600	5500	5400
	0 to +9°C	486	Wt		127	120	113	106	100	94	88	83	
F/F				7200	6900	6600	6300	6100	5900	5700	5600		
+10°C +14°C	494	Wt		127	120	113	106	100	94	88	82		
		F/F		7300	7000	6700	6400	6200	6000	5800	5700		

Jet Standard Atmosphere

Press. Ht. 1000 ft.	Stand. Temp. °C
0	+15
2	+11
4	+ 7
6	+ 3
8	- 1
10	- 5
12	- 9
14	-13
16	-17
18	-21
20	-25
22	-29
24	-33
26	-37
28	-41
30	-45
32	-49
34	-53
36	-57
38	-61
40	-65
42	-69

Table 2 Drift and wind component (TAS 460–505 knots)

Angle between Track and Wind Direction	WINDSPEED – KNOTS																					
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120
010° 350°	0 -5	0 -10	0 -15	0 -20	1 -25	1 -29	1 -34	1 -39	1 -44	1 -49	-54 -59	-63 -68	-63 -73	1 -78	2 -83	2 -88	2 -93	2 -98	2 -108	2 -118		
020° 340°	0 -5	0 -10	1 -14	1 -19	1 -23	1 -28	1 -33	2 -38	2 -43	2 -47	2 -52	2 -57	3 -61	3 -66	3 -71	3 -76	3 -80	4 -85	4 -90	4 -94	5 -105	5 -115
030° 330°	0 -4	1 -9	1 -13	1 -18	1 -22	2 -26	2 -30	2 -34	3 -39	3 -44	3 -48	4 -52	4 -56	4 -60	4 -66	5 -71	5 -75	5 -79	6 -84	6 -88	7 -98	7 -108
040° 320°	0 -4	1 -8	1 -12	1 -17	2 -19	2 -23	3 -27	3 -31	3 -35	4 -39	4 -43	5 -47	5 -51	5 -54	6 -59	6 -64	6 -68	7 -73	7 -77	8 -80	9 -89	9 -98
050° 310°	0 -3	1 -7	1 -10	2 -13	2 -17	3 -20	3 -23	4 -27	4 -30	5 -33	5 -37	5 -40	6 -43	6 -47	7 -51	7 -55	8 -59	8 -63	8 -67	9 -70	10 -77	11 -85
060° 300°	0 -2	1 -5	1 -8	2 -11	2 -13	3 -16	4 -19	4 -21	5 -24	5 -27	6 -30	6 -32	7 -35	7 -38	8 -41	8 -44	9 -48	9 -50	10 -54	10 -57	11 -63	12 -70
070° 290°	0 -1	1 -3	2 -6	2 -8	3 -9	3 -11	4 -13	4 -16	5 -18	6 -20	6 -21	7 -23	7 -25	8 -27	8 -30	9 -32	9 -36	10 -38	11 -41	11 -42	12 -48	13 -53
075° 285°	0 -1	1 -2	2 -4	2 -6	3 -8	3 -8	4 -10	5 -13	5 -14	6 -16	6 -18	7 -19	7 -20	8 -22	9 -25	9 -27	10 -29	10 -30	11 -33	12 -34	13 -40	14 -45
080° 280°	0 -1	1 -1	2 -2	2 -4	3 -5	3 -6	4 -8	5 -9	5 -10	6 -11	6 -12	7 -14	8 -15	8 -17	9 -19	9 -20	10 -22	10 -23	11 -26	12 -27	13 -30	14 -34
085° 275°	0 0	1 0	2 -1	2 -2	3 -3	4 -3	4 -4	5 -6	5 -6	6 -7	6 -8	7 -9	8 -10	8 -11	9 -13	10 -13	10 -15	11 -17	11 -18	12 -19	13 -21	14 -25
090° 270°	0 0	1 +1	2 +1	2 +1	3 0	4 0	4 -1	5 -2	5 -2	6 -3	6 -3	7 -3	8 -4	8 -4	9 -6	10 -7	10 -7	11 -9	11 -10	12 -10	13 -12	14 -14
095° 265°	0 +1	1 +1	2 +1	2 +2	3 +2	4 +2	4 +2	5 +2	5 +2	6 +2	6 +2	7 +2	8 +2	8 +2	9 +1	10 +1	10 0	11 -1	11 -1	12 -1	13 -2	14 -3
100° 260°	0 +1	1 +2	2 +2	2 +3	3 +4	4 +5	4 +6	5 +6	5 +6	6 +7	6 +8	7 +8	8 +8	8 +8	9 +8	9 +9	10 +8	10 +8	11 +8	12 +8	13 +8	14 +7
105° 255°	0 +1	1 +3	2 +3	2 +5	3 +6	3 +8	4 +9	5 +9	5 +10	6 +11	6 +12	7 +13	7 +14	8 +14	9 +14	9 +16	10 +16	10 +17	11 +18	11 +19	13 +18	14 +18
110° 250°	0 +2	1 +4	2 +5	2 +7	3 +9	3 +11	4 +12	4 +13	5 +13	6 +15	6 +17	7 +18	7 +19	8 +20	8 +21	9 +23	10 +23	10 +24	11 +24	12 +25	12 +27	14 +27
115° 245°	0 +2	1 +5	2 +6	2 +9	3 +11	3 +13	4 +14	4 +16	5 +18	5 +20	6 +22	6 +23	7 +24	7 +26	8 +27	9 +29	9 +30	10 +31	10 +32	11 +33	12 +37	13 +39
120° 240°	0 +2	1 +6	1 +8	2 +10	3 +12	3 +15	4 +17	4 +19	5 +21	5 +23	5 +26	6 +28	6 +30	7 +31	7 +32	8 +36	9 +37	9 +39	10 +40	10 +42	11 +47	12 +50
125° 235°	0 +3	1 +6	1 +9	2 +11	2 +14	3 +18	4 +20	4 +22	4 +25	5 +27	5 +30	6 +32	6 +35	7 +37	7 +39	8 +42	8 +44	9 +46	9 +48	10 +50	11 +54	12 +59
130° 230°	0 +3	1 +7	1 +10	2 +13	2 +16	3 +20	3 +23	4 +25	4 +28	4 +31	5 +33	5 +37	6 +40	6 +42	7 +44	7 +48	8 +50	8 +53	9 +55	9 +58	10 +63	11 +69
140° 220°	0 +4	1 +8	1 +11	2 +15	2 +19	2 +23	3 +27	3 +30	3 +34	3 +38	4 +42	4 +45	5 +48	5 +51	6 +54	6 +60	7 +62	7 +66	7 +69	8 +72	8 +79	9 +86
150° 210°	0 +4	1 +9	1 +13	1 +17	1 +21	2 +26	2 +31	2 +34	3 +39	3 +43	3 +47	3 +51	4 +55	4 +59	5 +63	5 +68	5 +72	5 +76	6 +79	6 +83	6 +92	7 +100
160° 200°	0 +5	0 +10	1 +14	1 +19	1 +23	1 +28	1 +33	2 +38	2 +43	2 +47	2 +52	2 +56	3 +60	3 +64	3 +69	3 +75	3 +79	4 +83	4 +87	4 +92	4 +102	5 +111
170° 190°	0 +5	0 +10	0 +15	0 +20	1 +24	1 +29	1 +34	1 +39	1 +44	1 +49	1 +54	1 +59	1 +63	1 +68	2 +73	2 +78	2 +83	2 +88	2 +92	2 +97	2 +107	2 +117

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