

The technical content of this document is approved under the authority of DOA nr. EASA.21J.140 (C642-Issue1)

8.47 SKY ENVELOPES

8.47.1 GENERAL INFORMATION

This supplement shall be inserted in the Flight Manual, in Section 8: 'Supplements' with the revisions record sheet amended accordingly.

Information contained herein supplements, or in the case of conflict, supersedes that contained in the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Hot Air Balloon Flight Manual.

Issue 4 of this supplement consists of four pages.

There are no additional continued airworthiness requirements associated with this supplement.

8.47.1.2 Certification Basis

The types of balloon for which this supplement is applicable have been approved by EASA under the following Type Certificate.

BB20 (UKCAA)	Sky -16
BB5 (UKCAA)	Sky -24
BB19 (UKCAA)	Sky -28

8.47.2 LIMITATIONS

8.47.2.10.3 Conventionally Shaped Balloons

1. The maximum permitted rate of climb and descent for all Sky natural shape envelopes is 1000 ft/min (5 m/sec). At low flying weights (< 60% of MTOM) a maximum rate of 700 ft/min (3.5 m/sec) is recommended.

Table 1: Envelope Weight Limits And Volumes

Variant	Volume		Standard MTOM		Reduced MTOM		MLM		FAI Class. AX
	ft ³	m ³	kg	lb	kg	lb	kg	lb	
25-16	25 000	708	227	500	227	500	-	-	4
31-24	31 450	890	285	629	285	629	-	-	4
56-24	56 000	1586	508	1120	499	1100	-	-	6
65-24	65 000	1841	590	1300	499	1100	-	-	7
70-16	70 000	1982	635	1400	499	1100	-	-	7
77-24	77 500	2195	703	1550	499	1100	-	-	7
80-16	80 000	2266	726	1600	499	1100	-	-	8
90-24	90 000	2549	816	1800	499	1100	-	-	8
105-24	105 000	2974	952	2100	952	2100	476	1050	8
120-24	120 000	3398	1088	2400	999	2202	544	1200	9
140-24	140 000	3965	1270	2800	999	2202	635	1400	9
160-24	160 000	4531	1451	3200	999	2202	726	1601	10
180-24	180 000	5098	1633	3600	999	2202	817	1801	10
200-24	200 000	5664	1814	4000	999	2202	909	2004	10
220-24	220 000	6230	1980	4365	999	2202	11	2099	10
240-24	240 000	6797	2177	4800	1999	4406	1088	2399	11
260-24	260 000	7363	2358	5200	1999	4406	1179	2600	11
317-24	317 000	7929	2700	5952	1999	4406	11	2750	11
400-28	400 000	11328	3600	7937	2699	5951	12	3001	11
500-28	500 000	14158	4250	9370	2699	5951	13	3151	11

8.47.3 EMERGENCY PROCEDURES

No change.

8.47.4 NORMAL PROCEDURES

No change.

8.47.5 WEIGHT CALCULATIONS

Table 2 (additional): Total Permitted Lift (kg)

Balloon Size	Lift (lb) Per 1000 cu.ft.										
	10	11	12	13	14	15	16	17	18	19	20
220	998	1098	1197	1297	1397	1497	1596	1696	1796	1896	1980
317	1438	1581	1725	1869	2013	2157	2300	2444	2588	2700	2700
500	2268	2494	2721	2948	3175	3402	3628	3855	4082	4250	4250

Table 3 (additional): Total Permitted Lift (lb)

Balloon Size	Lift (lb) Per 1000 cu.ft.										
	10	11	12	13	14	15	16	17	18	19	20
220	2200	2420	2640	2860	3080	3300	3520	3740	3960	4180	4365
317	3170	3487	3804	4121	4438	4755	5072	5389	5706	5953	5953
500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9370	9370

8.47.6 BALLOON AND SYSTEMS DESCRIPTION

8.47.6.2 Envelope

There are three Sky envelope types, all of which are of the conventional 'inverted teardrop' shape. Approved volumes and variants are listed in the Type Certificate Data Sheets listed in 8.47.1.2.

Type	No. of Gores	Suspension Cables	Profile
Sky -16	16	16	Semi-Bulbous
Sky -24	24	24	Smooth
Sky -28	28	28	Smooth

8.47.7 BALLOON MAINTENANCE, HANDLING AND CARE

No change.

8.47.9 EQUIPMENT LIST
Table 5 - Envelopes

Envelope Type	Drawing Number	Applicable Burners	Applicable Baskets
Sky 25-16	A4/EN/2516/A	A	A, A1
Sky 70-16	A4/EN/7016/A	A, B	A, B, C, D, E, F, G
Sky 80-16	A4/EN/8016/A	A, B	A, B, C, D, E, F, G
Sky 31-24	A4/EN/31/A	A	A, A1
Sky 56-24	A4/EN/56/A	A, B	A, B, C, D, E, F, G
Sky 65-24	A4/EN/65/A	A, B	A, B, C, D, E, F, G, H
Sky 77-24	A4/EN/77/A	A, B	A, B, C, D, E, F, G, H, I
Sky 90-24	A4/EN/90/A	A, B	A, B, C, D, E, F, G, H, I, J
Sky 105-24	A4/EN/105/A	A, B	B, C, D, E, F, G, H, I, J, K
Sky 120-24	A4/EN/120/A	B	C, D, E, F, G, H, I, J, K, L
Sky 140-24	A4/EN/140/A	B, C	D, E, F, G, H, I, J, K, L, M
Sky 160-24	A4/EN/160/A	B, C	D, E, F, G, H, I, J, K, L, M
Sky 180-24	A4/EN/180/A	B, C, D	D, E, F, G, H, I, J, K, L, M, N
Sky 200-24	A4/EN/200/A	B, C, D	E, F, G, H, I, J, K, L, M, N, O
Sky 220-24	A4/EN/220/A	B, C, D	G, H, I, J, K, L, M, N, O, P, Q
Sky 240-24	A4/EN/240/A	B, C, D	G, H, I, J, K, L, M, N, O, P, Q
Sky 260-24	A4/EN/260/A	B, C, D	H, I, J, K, L, M, N, O, P, Q
Sky 317-24	A4/EN/317/A	D	L, M, N, O, P, Q
Sky 400-28	A4/EN/400/A	D	N, O, P, Q
Sky 500-28	A4/EN/500/A	D	N, O, P, Q, R