

Issue 9 to supplement 8.33  
is approved under the authority of DOA ref. CAA.21J.0140 (Mod C838)

### 8.33 SKY 'BOTTOM ENDS'

#### 8.33.1 GENERAL INFORMATION

Throughout this supplement the term "Cameron" refers to envelopes, burners and cylinders manufactured by Cameron, Lindstrand Hot Air Balloons Limited, Sky and Thunder & Colt.

Issue 9 of this supplement has six pages.

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

#### 8.33.2 LIMITATIONS

##### 8.33.2.3 FUEL

##### 8.33.2.1 Fuel Pressures

1. The minimum fuel pressure when using Sky BR1 and BR2 (Mistral) burners is 4 bar (58 psi).
2. The maximum fuel pressure when using Sky BR1 and BR2 (Mistral) burners is 12 bar (174 psi).
3. The minimum fuel pressure for balloons >340,000 cu.ft (9629m<sup>3</sup>) is 7 Bar (102 PSI)

##### 8.33.2.4 Minimum Burner Requirements

Burner configuration	Permitted Envelope Volume
Sky Double BR1 and BR2 (Mistral)	31,000 cu.ft to 200,000 cu.ft 878 m <sup>3</sup> to 5,664 m <sup>3</sup>
Sky Triple BR1 and BR2 (Mistral)	140,000 cu.ft to 317,000 cu.ft 3,964 m <sup>3</sup> to 8,977 m <sup>3</sup>
Sky Quad BR2 (Mistral)	180,000 cu.ft to 500,000 cu.ft 5,097 m <sup>3</sup> to 14,158 m <sup>3</sup>

**8.33.2.18 Equipment Interchangeability**

1. The burners and baskets manufactured by Sky Balloons which may be used in combination with Cameron envelopes are listed in Section 8.33.9 of this supplement.
2. Sky Baskets may be used in conjunction with Cameron Shadow, Shadow/Stealth, Stratus and Sirocco burners where the burners are fitted in compatible frames. Compatible frames (additional to Sky frames) are given in Table 6.
3. Sky Baskets may be used in conjunction with Schroeder burners where the burners are fitted in compatible frames. Compatible frames (additional to Sky frames) are given in Table 6.
4. A Sky BR2 quad burner, when fitted with a CQ2104 burner hanger and CB2950 Heavy Duty Gimbal Block may be installed, subject to an Assembly Check (Service Instruction 21), into a Cameron burner frame as a replacement for a Cameron Quad burner.

**8.33.3 EMERGENCY PROCEDURES**

No change.

**8.33.4 NORMAL PROCEDURES**

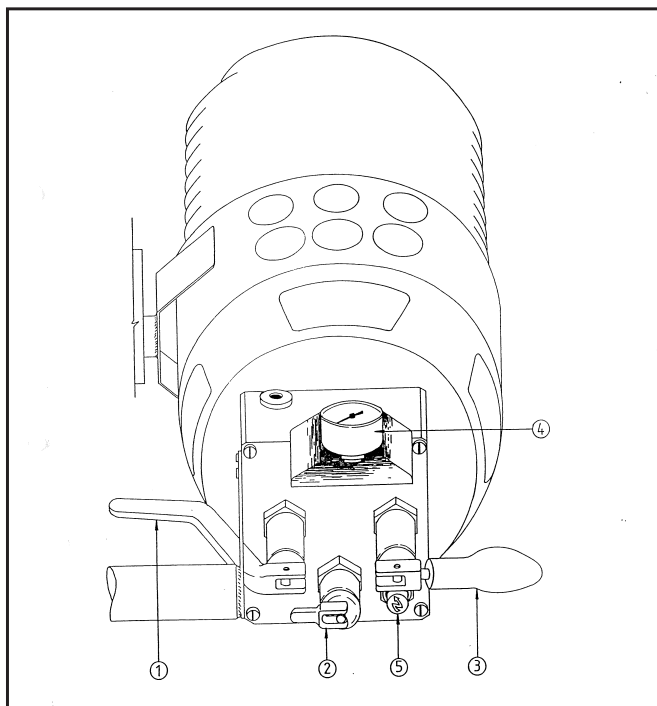
No change.

**8.33.5 WEIGHT CALCULATIONS**

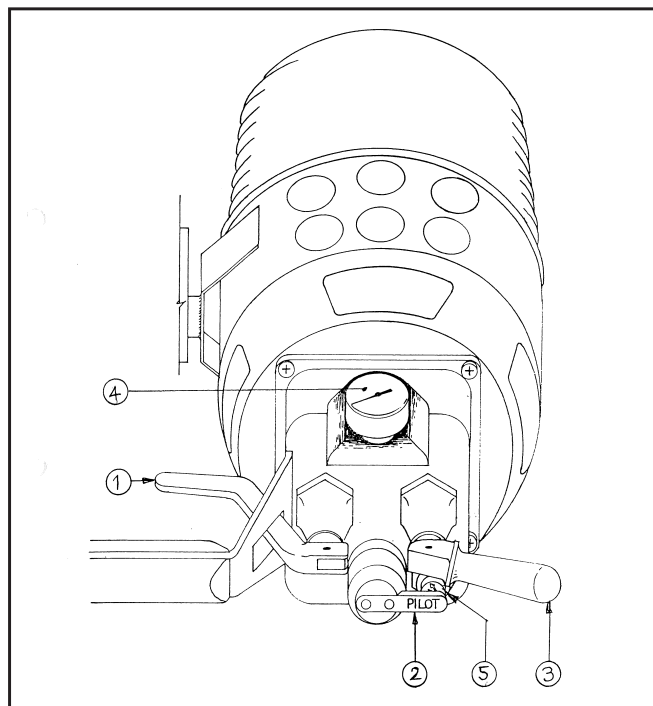
No change.

**8.33.6 BALLOON AND SYSTEMS DESCRIPTION****8.33.6.3 Burner****8.33.4.5.6.1 Burners (Sky BR1 type)**

This burner design, as it is supplied, has been well proven to 12,000ft. For sustained flights above this altitude the following procedure must be followed. The pilot light unit consists of an aluminium bodied regulator, screwed into the main valve block, a brass hexagonal section stem and a stainless steel head. At the lower end of the brass stem is an air inlet hole. Above this hole is a small screw. For high altitude flight this screw should be removed. At low altitude this has no adverse effect but the pilot light will make more noise. In this condition the pilot light will remain reliable to at least 15,000ft. Repeat this procedure for all pilot lights.



▲ Sky BR1 Burner Controls



▲ Sky BR2 Mistral Burner

1. Main Burner Valve
2. Pilot Light Valve
3. Whisper (liquid) Burner Valve
4. Pressure Gauge
5. Pilot Light Igniter button

### 8.33.7 BALLOON MAINTENANCE, HANDLING AND CARE

No Change.

### 8.33.9 EQUIPMENT LIST

#### 8.33.9.2 Equipment List

Tables 6, 7 and 8 list the Sky Balloons baskets, burners and fuel cylinders which may be used with Cameron envelope types.

#### 8.21.9.1.1 Burner Frame Compatibility

Table 6 lists the compatible burner load frames for each basket type. The burner load frames are divided into two categories:

Applicable Burner Frames (specific):

These are frames designed specifically to fit a given basket type.

Applicable Burner Frames (with Assembly check):

These are structurally and dimensionally similar frames which have been designed for similar baskets that incorporate minor design changes (e.g. additional restraint lugs, offset crossbar, changed rod socket angles etc.). These frames may only be combined with the listed basket after an assembly check by a competent person (normally an inspector). The Assembly Check is detailed in Service Instruction 21.

**Table 6: Sky Balloons Baskets**

Basket Category	Basket Number	Basket Description*	Applicable Cylinders	Applicable Burner Frames (specific)	Applicable Burner Frames (with Assembly check)
C	A0/BT/1000/A	1.07 x 1.29 O	1a, 1, 2, 3	A0/BF1/1000/A	CB2203, CB2224, CB2231, CB2598, CB2650, CB2652, CB2857, CB2995, CB8810,CB8810, CB8811, CB8820, CB8821, CB8864,CB8894, CB8902, CB8903, CB8905, Concept (CB994,CB2000), BA-151-001 (LHABL-SMALL), BA-152-A-002 (LHABL) Schroeder 201.6/201.7
C	A0/BT/1000/AA	1.07 x 1.29 O	1a, 1, 2,		
C	A0/BT/1100/A	1.07 x 1.29 O	1a, 1, 2,		
C	A0/BT/1500/A	1.07 x 1.29 O	1a, 1, 2, 3		
C	A0/BT/1500/AA	1.07 x 1.29 O	1a, 1, 2,		
E	A0/BT/2000/A	1.19 x 1.55 O	1a, 1, 2, 3	A0/BF1/1000/AA	
E	A0/BT/2000/AA	1.19 x 1.55 O	1a, 1, 2		
E	A0/BT/2500/AA	1.19 x 1.55 O	1a, 1, 2		
G	A0/BT/3000/A	1.29 x 1.80 O	1a, 1, 2, 3	A0/BF1/1000/AB	
G	A0/BT/3000/AA	1.29 x 1.80 O	1a, 1, 2		
G	A0/BT/3100/A	1.29 x 1.80 O	1a, 1, 2		
G	A0/BT/3200/A	1.29 x 1.80 P	1a, 1, 2, 3		
G	A0/BT/3500/A	1.29 x 1.80 O	1a, 1, 2, 3		
G	A0/BT/3500/AA	1.29 x 1.80 O	1a, 1, 2		
I	A0/BT/10000/A	1.57 x 2.07 T	1a, 1, 2, 3	A0/BF1/2***/A / CB2339	CQ2074
I	A0/BT/12000/A	1.57 x 2.47 TT	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2091	
I	A0/BT/12500/A	1.57 x 2.47 TT	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2091	
J	A0/BT/12100/A	1.57 x 2.47 T	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2091	
J	A0/BT/12150/A	1.57 x 2.47 T	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2021, CQ2091	
M	A0/BT/14000/A	1.57 x 2.87 TT	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2091	
M	A0/BT/14500/A	1.57 x 2.87 T	1a, 1, 2, 3	A0/BF1/2***/A, A0/BF1/3***/A, CQ2091	

Table continued on the next page.

Basket Category	Basket Number	Basket Description*	Applicable Cylinders	Applicable Burner Frames (specific)	Applicable Burner Frames (with Assembly check)
L	A0/BT/14100/A	1.57 x 2.87 T	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
L	A0/BT/14150/A	1.57 x 2.87 T	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
M	A0/BT/16000/A	1.57 x 3.07 TT	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
M	A0/BT/16500/A	1.57 x 3.07 TT	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
O	A0/BT/18000/A	1.57 x 3.27 TT	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
O	A0/BT/18500/A	1.57 x 3.27 TT	1a, 1, 2, 3	A0/BF1/2***A, A0/BF1/3***A, CQ2091	
R	A4/BT/500/A	1.57 x 5.35 TT	1a, 1, 2, 3	A4/BF1/500/A	

\* Denotes minor changes in burner frame geometry;

LHABL = Lindstrand Hot Air Balloons Limited

**Table 7: Sky Balloons Fuel Cylinders**

Cylinder Category	Cylinder Material	Cylinder Model
2	STAINLESS STEEL	V20
2	STAINLESS STEEL	V30
3	STAINLESS STEEL	V40

**Table 8: Sky Balloons Burners**

Burner Category	Burner Model
B	BR 1 Double
B	BR 2 Double (Mistral)
C	BR 1 Triple
C	BR 2 Triple (Mistral)
D	BR 2 Quad (Mistral)

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