

**Approved by EASA under Approval Number EASA.BA.C.01075
on 18 April 2007**

8.6 LINDSTRAND 'BOTTOM ENDS' WITH CAMERON AND THUNDER & COLT ENVELOPES

8.6.1 GENERAL INFORMATION

Issue 2 of this supplement has six pages.

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

This supplement was originally approved by CAA.UK as Supplement 22 to Flight Manual Issue 9 18 June 2003

8.6.1.1 Record of Amendments

Issue Number	Description	Pages Affected	Date	Approval
1	HABFM Issue 10 - First Issue	All	10-04-06	Approved by EASA under Approval Number EASA.BA.A.01000
2	Addition of Record of Amendments, T&C and Cameron burners and burner frame information	All pages re-numbered	18-04-07	Approved by EASA under Approval Number EASA.BA.C.01075

8.6.2 LIMITATIONS

8.6.2.18 Equipment Interchangeability

1. The burners and baskets manufactured by Lindstrand Balloons which may be used in combination with Cameron and Thunder & Colt envelopes are listed in Section 8.6.9 of this supplement.
2. Lindstrand Baskets may be used in conjunction with Thunder & Colt Stratus, C3T (Magnum), C3 and C2 burners where the burners are fitted in compatible frames. A listing of compatible frames is given in Table 14.

3. Lindstrand Baskets may be used in conjunction with Cameron Shadow, Shadow/Stealth and Sirocco burners where the burners are fitted in compatible frames. A listing of compatible frames is given in Table 14.

8.6.3 EMERGENCY PROCEDURES

8.6.3.11 Pilot Light Failure

8.6.3.11.1 Liquid Fire As Pilot Light

If a liquid fire which has a 90° ball valve is fitted to the burner, then this can be turned on and adjusted to give a 1 m (3 ft) high flame. This flame can then be used as the pilot light for the main burner until an emergency landing is completed. If the liquid fire valve is the toggle action type, then the toggle valve should be opened fully and the cylinder valve which is supplying the fuel should be adjusted until the resulting flame is 1.5 m (5 ft) in length. The alternative fuel system or burner should then be used to supply fuel to the main burner. In a double burner, cross-ignition will occur.

8.6.3.11.2 Second Burner As Pilot Light

In a similar manner to using the liquid fire as a pilot light, in a single burner with a dual fuel system (the minimum requirement) or a double burner system, the "second" burner can be used as a pilot light for the first.

If the main blast valve for the burner is a ball valve action with no spring return system fitted, then the ball valve should be opened sufficiently to achieve a flame length of 1 m (3 ft). The flame should be ignited using a hand igniter such as matches or gas lighter. The other burner can then be used normally to achieve a controlled landing as soon as possible.

If the main blast valve for the burner is a toggle action type of valve, then the procedure is similar to that described above for the liquid fire. The blast valve should be opened fully and the cylinder valve adjusted so that the resulting flame is 1 m (3 ft) in length. The other burner should be used as normal to achieve a landing.

8.6.3.11.3 Partially Open Valves

In any of the above procedures, which include a valve being half opened to achieve a low fuel flow rate, it should be noted that this procedure will cause cooling of the valve which is partially open.

This cooling effect will eventually result in freezing of the valve and is not recommended for prolonged periods. The technique should only be used in an emergency and even then, a landing should be made as soon as possible.

8.6.4 NORMAL PROCEDURES

No change.

8.6.5 WEIGHT CALCULATIONS

No change.

8.6.6 BALLOON AND SYSTEMS DESCRIPTION

8.6.6.3 Burner

Refer to applicable Lindstrand Flight Manual.

8.6.6.4 Fuel Cylinders

Refer to applicable Lindstrand Flight Manual.

8.6.6.5 Basket

Refer to applicable Lindstrand Flight Manual.

8.6.7 BALLOON MAINTENANCE, HANDLING AND CARE

Refer to the applicable Lindstrand Flight Manual.

8.6.9 EQUIPMENT LIST

8.6.9.2 Equipment List

Tables 11, 12 and 13 list the Lindstrand baskets, burners and fuel cylinders which may be used with Cameron envelope types.

Table 14 lists equivalent compatible burner frames for Lindstrand, Thunder & Colt and Cameron products.

Table 11 - Lindstrand Burners

Burner Category	Burner Model
A	Jetstream Single
A	Jetstream Super Single
B	Jetstream Double
B	Jetstream Series 2 Double
C	Jetstream Double + CLF
C	Jetstream Triple
C	Jetstream Series 2 Triple
D	Jetstream Triple + CLF
D	Jetstream Quad
D	Jetstream Series 2 Quad
D	Jetstream Series 2 Super Quad

Table 12 - Lindstrand Fuel Cylinders

Cylinder Category	Cylinder Material	Cylinder Model
1a	ALUMINIUM	Mini Worthington
1	ALUMINIUM	Worthington
2	STAINLESS STEEL	V20
2	STAINLESS STEEL	V30
3	STAINLESS STEEL	V40
6	STAINLESS STEEL	H30
6	STAINLESS STEEL	H40
6	STAINLESS STEEL	H55
2	TITANIUM	T30

Table 13 - Lindstrand Baskets

Basket Category	Basket Number	Basket Description*	Applicable Cylinders	Applicable Burner Frames
A	04	100 x 85 O	1a, 1, 2, 3	Mini
C	01	110 x 115 O	1a, 1, 2, 3	Small
C	05	98 x 113 O	1a, 1, 2, 3	Small
C	09	96 x 102 O	1a, 1, 2, 3	Small
D	02	110 x 130 O	1a, 1, 2, 3	Small
D	06	100 x 125 O	1a, 1, 2, 3	Small
D	07	100 x 137 O	1a, 1, 2, 3	Small
E	03	110 x 155 O	1a, 1, 2, 3	Small
E	08	122 x 145 O	1a, 1, 2, 3	Medium
F	10	122 x 125 O	1a, 1, 2, 3	Medium
G	11	122 x 165 O	1a, 1, 2, 3	Medium
G	12	122 x 185 T	1a, 1, 2, 3	Medium
I	13	122 x 205 T	1a, 1, 2, 3	Medium
I	14	122 x 220 T	1a, 1, 2, 3	Medium
I	15	122 x 260 TT	1a, 1, 2, 3	Medium
I	20	152 x 205 T	1a, 1, 2, 3,6	Large
I	40	129 x 247 T	1a, 1, 2, 3	Large
J	34	140 x 240 TT	1a, 1, 2, 3	Large
J	35	140 x 240 T	1a, 1, 2, 3	Large
L	21	152 x 240 T	1a, 1, 2, 3,6	Large
M	22	152 x 270 T	1a, 1, 2, 3,6	Large
M	23	152 x 260 TT	1a, 1, 2, 3,6	Large
M	30	152 x 280 TT	1a, 1, 2, 3,6	Large
M	31	140 x 270 TT	1a, 1, 2, 3	Large
M	32	140 x 300 TT	1a, 1, 2, 3	Large
M	36	140 x 270 T	1a, 1, 2, 3	Large
M	37	140 x 340 TT	1a, 1, 2, 3	Large
M	41	135 x 285 T	1a, 1, 2, 3	Large
N	24	152 x 300 TT	1a, 1, 2, 3,6	Large
N	25	152 x 350 TT	1a, 1, 2, 3,6	Large
N	28	152 x 300 T	1a, 1, 2, 3,6	Large
N	29	152 x 325 TT	1a, 1, 2, 3,6	Large
Q	26	152 x 390 TT	1a, 1, 2, 3,6	Large
Q	27	152 x 430 TT	1a, 1, 2, 3,6	Large / Super Large
Q	33	140 x 390 TT	1a, 1, 2, 3,6	Large
Q	204	170 x 360 TT	1a, 1, 2, 3,6	Large
R	50	152 x 610 TT	1a, 1, 2, 3,6	Hanson Big Boy

Table 14 Lindstrand / Thunder & Colt / Cameron - Compatible Burner Frames

Lindstrand Frame Designation	Thunder & Colt Frame Designation	Applicable Cameron / Thunder & Colt Part Numbers
Small (700x700)	Small (700x700)	A0/BFS/500A Series, CB8810, B8811, CB8820, CB8821, CB8864, CB8894, CB8902, CB8903
Medium (850x850)	Medium (850x850)	A0/BFM/600 Series, CB8822, CB8823, CB8824, CB8825, CB8830, CB8831