This document is a translation of the corresponding Schroeder fire balloons flight manual appendix C 1.1 that is approved under the approval no. BA.C.01104

This appendix describes the utilization of Cameron Balloons Ltd. Bottom end equipment (Cameron und Thunder&Colt) with Schroeder fire balloons envelopes.

1. General description

No changes

2. Limitations

2.1. For the combination of Schroeder fire balloons envelopes with Cameron balloons bottom end equipment there must only be used the bottom end equipment, as baskets, burners, and cylinders that are mentioned in this appendix.

2.2. All equipment manufactured by Cameron Balloons must comply and be operated within the limitations and requirements mentioned in the current manuals of the manufacturer. The operational limitations must comply to the information stated in the current Schroeder fire balloons flight manual.

2.3. All parts of equipment must be airworthy

2.4. The maintenance tasks of the corresponding manufacturer of the piece of equipment is applicable.

3. Emergency procedures

No changes

A. Pilot light failure

Double-, triple- or quad burner

1. Keep flying the balloon with the other burner and try to ignite the failed pilot light. If more pilot lights fail, proceed as follows:
   - open the whisper valve a little and ignite it.
   - Adjust the flame of the whisper burner so that it functions as pilot light.
   - Start using the main burner again as usual, observe the whisper burner valve, it might freeze in. In case of a frozen valve proceed as described in Paragraph 2
   - land as soon as possible
2.
   - close the valve of the cylinder to which the affected burner is connected
   - fully open the main burner valve of the affected burner
   - open the valve of the cylinder so that only a little bit of gas can escape the fuel cylinder.

- Ignite the burner flame and steer the balloon by using the cylinder valve make sure that the flame does not extinguish
- Land as soon as possible

B. Icing of valves using a vapor pilot light

The fuel cylinders are in a horizontal position during inflation. During the inflation procedure, the vapor valve is getting in contact with the liquid propane gas. If the time of contact to liquid fuel is too long it might cause the icing of the valve and the pilot light extinguishes. If the pilot light extinguishes, close the valve until the liquid propane is burnt and the icing has decreased. After that, open the valve and ignite the pilot light again.

C. Failure of a burner valve

If a main burner valve fails, use the other burner/s to fly the balloon.

- If the main valve is open and cannot be closed or if there is a leak, close the cylinder valve of the affected burner and let the remaining gas from the fuel hoses burner down. Use a different burner valve.
- If the main burner valve is jammed in the close position, use a different valve.
- Land as soon as possible

4. Standard procedures

No changes.

5. Calculation of load capacity

No changes.
The specifications stated in the Schroeder fire balloons flight manual are applicable.

6. Description of the balloon equipment

6.1. Burner

Refer to the current manual of Cameron Balloons and the Cameron flight manual appendix Section 8 / 8.5 „Out of production models“.

6.2. Baskets

Refer to the current manual of Cameron Balloons and the Cameron flight manual appendix Section 8 / 8.21 „Special Baskets“.

6.3. Fuel cylinders

Refer to the current manual of Cameron Balloons and Schroeder fire balloons.

7. Maintanance, Operation and Care

No changes.

Refer to the current manuals of Cameron Balloons and Schroeder fire balloons.

8. Equipment

The following tables contain the baskets, burners and fuel cylinders that can be used within the framework of this technical note for the combination with Schroeder fire balloons envelopes

Overview on applicable Cameron Balloons baskets according to the Cameron Balloons flight manual Isue 10 and following revisions / Equipment list

Basket category	Cameron Balloons drawing number	Type
B	CB310-1A	O
C	CB300-2A	O
C	CB310-2A	O
C	CB3050-2	O
C	CB3115-2	O
C	CB3011-2A	O
C	CB3023-2	O
C	CB3011-2B	O
C	CB3051	O
I D	CB300-3A	O
D	CB310-3A	O
D	CB3050-3A	O
D	CB3115-3	O
D	CB3011-3A	O
D	CB3023-3	O
D	CB3011-3B	O
D	CB3052	O
D	CB8012	O
D	CB8017	O
D	CB8001	O
D	CB8006	O
D	CB8013	O
D	CB8018	O
D	CB8002	O
D	CB8007	O
E	CB300-4A	O
E	CB310-4A	O
E	CB3050-4	O
E	CB3115-4	O
E	CB3011-4A	O
E	CB3023-4	O
E	CB3011-4B	O
E	CB8014	O
E	CB8019	O
E	CB8003	O

Basket category	Cameron Balloons drawing number	Type
E	CB8008	O
F	CB3320	W
F	CB8015	O
F	CB8020	O
F	CB8004	O
F	CB8009	O
F	CB8200	T
G	CB303	O
G	CB3238	P
G	CB3233	T
H	CB991	T
H	CB3060	W
H	CB3376	T
H	CB8266	T
I	CB3310	T
I	CB8026	TT
J	CB754	TT
K	CB3164	Os
L	CB3314	T
L	CB3081	TTW
M	CB3004	TT
M	CB971	TT D
M	CB3387	TT
N	CB3200	TT Os
O	CB3042	TT
O	CB3040	TT D
O	CB3049	TT S
O	CB3235	TT
O	CB3223	TTS
O	CB3223	TTS
O		
O		
P		
Q		
R		

*** Legend:-** O = open; P = single partition; T = T partition; TT = double T partition; Os = offset; D = designed for use in Germany; W = wheelchair access.

Baskets: Special baskets

According to Cameron flight manual Issue 10 and following revisions/Section 8 - Supplements

Basket category	Cameron Balloons drawing number	Type
C	CB3144	O Flat
C	CB814	O Flat
C	CB660	O Flat
C	CB3267	“Dante”
C	CB8000	O
C	CB8005	H O
C	CB8010	O
C	CB8016	H O
C	CB8047	O
C	CB8054	O
C	CB3327	Voyager III
D	CB3033	C 80
D	CB3046	O
D	CB3093	H O
D	CB3173	O
D	CB869	O
D	CB8021	H O
D	CB8048	O
D	CB8055	O
D	CB8056	O
D	CB8062	O
E	CB3057	H O
E	CB3064	H O
E	CB3085	O
E	CB3126	H O
E	CB3127	H O
E	CB3147	O
E	CB3156	H O
E	CB3157	H O
E	CB3204	H O
E	CB3207	H O
E	CB3214	O
E	CB3278	O
E	CB8022	H O
E	CB8045	O
E	CB8051	O
E	CB8052	O
F	CB8023	H O
F	CB8044	0 H O
F	CB8049	H O
F	CB8053	H O
F	CB8060	H O
F	CB8061	H O
F	CB8064	H O
F	CB8067	H O
F	CB8070	H O

Basket category	Cameron Balloons drawing number	Type
F	CB8072	H O
F	CB8227	T
F	CB3062	O
F	CB3087	O
F	CB3243	O
F	CB3088	O
F	CB3132	O
F	CB3136	O
F	CB3151	O
F	CB3184	O
F	CB3188	O
F	CB3206	O
F	CB3244	O
F	CB3286	O
F	CB8070	O
G	CB308	P
G	CB867	P
G	CB819	P
G	CB950	P
G	CB3135	P
G	CB3150	P
G	CB3153	P
G	CB3009	T
G	CB3022	T
G	CB3056	T
G	CB3068	T
G	CB3130	T
G	CB3233	T
H	CB986	T
H	CB3091	T
H	CB3340	T
H	CB8201	T
I	CB302-I	T
I	CB943	T
I	CB3175	T
I	CB8202	T
I	CB8244	T
I	CB8203	T
I	CB8245	T
I	CB755	TT
I	CB802	T
I	CB862	T
I	CB3187	T
J	CB302-2	T
J	CB624	T
J	CB860	T

Baskets: Special baskets

Basket category	Drawing number Cameron	Type
J	CB977	T
J	CB8232	TT
J	CB8247	TT
J	CB8257	T
J	CB8260	T
J	CB3173	TT
J	CB3232	TT
J	CB3084	TT
J	CB8204	T
J	CB8205	T
K	CB3164	Os
L	CB3020	T
L	CB3075	T
L	CB3081	TT W
L	CB3250	T
L	CB3257	T
L	CB3274	T
L	CB3305	T
M	CB971	TT D
M	CB3017	TT
M	CB3097	TT
M	CB3139	TT
M	CB8207	TT
M	CB8208	TT
M	CB8235	TT L
M	CB8270	TT L
M	CB8229	TT L
N	CB3182	TT Os
N	CB3200	Os
N	CB3209	TT L

Basket category	Drawing number Cameron	Type
M	CB971	TT D
M	CB3017	TT
M	CB3097	TT
M	CB3139	TT
M	CB8207	TT
M	CB8208	TT
M	CB8235	TT L
M	CB8270	TT L
M	CB8229	TT L
N	CB3182	TT Os
N	CB3200	Os
N	CB3209	TT L
O	CB3077	TT S
O	CB3032	TT S
O	CB3040	TT D
O	CB3079	TT
O	CB3100	TT
O	CB3121	TT S
O	CB3134	TT
O	CB3167	TT
O	CB3225	TT
O	CB8209	TT
O	CB8240	TT L

Remarks:

The drawing number and serial number is engraved in the basket frame (near the burner rods). Cameron balloons must be contacted for further information.

*** Legend:-** O = Open; P = single partition; T = T partition; TT = double T partition; Os = offset; D = designed for use in Germany; W = wheelchair access

Overview on applicable Cameron balloons burner:

Burner category	Drawing number	Burner denotation
B	CB2222	Double Shadow, Fixed Frame
B	CB2433	Double Shadow Solenoid Valve, Fixed Frame
B	CB2215	Double Shadow, Adjustable Height Frame
B	CB2243	Double Shadow / Stealth, Fixed Frame
B	CB2251	Double Shadow Solenoid Valve / Stealth Solenoid Valve, Fixed Frame
B	CB2244	Double Shadow / Stealth, Adjustable Height Frame
B	CB2694	Double Sirocco, Fixed Frame
B	CB2691	Double Sirocco E.P., Fixed Frame
B	CB2695	Double Sirocco, Adjustable Height Frame
B	CB8720	Double Stratus, Liquid Pilot Light
B	CB8721	Double Stratus, Vapour Pilot Light
C	CB2255	Triple Shadow
C	CB2520	Triple Shadow, Squeeze Bar Action, with Crossflow
C	CB2301	Triple Stealth (double) / Shadow (single)
C	CB2289	Triple Shadow (double) / Stealth (single)
C	CB2446	Triple Shadow / Stealth (double) ´ Shadow (single)
C	CB2459	Triple Stealth (double) / Shadow (single), Squeeze bar Action
C	CB2467	Triple Shadow (double) / Stealth (single), Squeeze bar Action
C	CB2469	Triple Shadow / Stealth (double) / Shadow (single), Squeeze bar Action
C	CB2696	Triple Sirocco
C	CB2692	Triple Sirocco E.P.
C	CB8730	Triple Stratus, Liquid Pilot Light.
C	CB8731	Triple Stratus, Liquid Pilot Light, ´T´ Baskets
C	CB8732	Triple Stratus, Liquid Pilot Light, ´TT´ Baskets
C	CB8733	Triple Stratus, Vapour Pilot Light
C	CB8734	Triple Stratus, Vapour Pilot Light, ´T´ Baskets
C	CB8735	Triple Stratus, Vapour Pilot Light, ´TT´ Baskets
D	CB2256	Quad Shadow
D	CB2351	Quad Shadow, Dual Squeeze Bar
D	CB2305	Quad Shadow (double) / Stealth (double)
D	CB2342	Quad Shadow (double) / Stealth (double), Dual Squeeze Bar
D	CB2395	Quad Shadow / Stealth (double) / Shadow / Stealth (double)
D	CB2697	Quad Sirocco
D	CB2693	Quad Sirocco E.P.
D	CB8740	Quad Stratus, Liquid Pilot Light
D	CB8741	Quad Stratus, Liquid Pilot Light, Crossflow
D	CB8742	Quad Stratus, Vapour Pilot Light
D	CB8743	Quad Stratus, Vapour Pilot Light, Crossflow

Overview on applicable Cameron balloons burner:

here: Out of production burner, according to Cameron flight manual issue 10, section 8-supplements and following revisions

Burner category	Drawing number	Burner denotation
B	CB205	Double MK.3
B	CB392	Double MK.4
B	CB451	Double MK.4
B	CB460	Double MK.4 Solenoid Valve
B	CB494	Double MK.4 Solenoid Valve
B	CB579-1/-2	Double MK.4 'Super' (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB595-1/-2	Double MK.4 'Super' Solenoid Valve (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2008-1/-2	Double Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2031-1/-2	Double Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2059	Double MK.5
B	CB2075-1/-2	Double Shadow (Vapour Pilot Light) / Liquid Pilot Light)
B	CB2085-1/-2	Double Stealth Solenoid Valve (Vapour Pilot Light) / Liquid Pilot Light)
B	CB2086-1/-2	Double Stealth Solenoid Valve (Vapour Pilot Light) / Liquid Pilot Light)
B	CB2101-1/-2	Double Shadow / Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2111-1/-2	Double MK.4 'Super' / Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2153-1/-2	Double Shadow / Stealth Solenoid Valve (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2195-1/-2	Double Shadow Solenoid Valve (Vapour Pilot Light) / Liquid Pilot Light)
B	CB2239-1/-2	Double Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2240-1/-2	Double Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2460-1/-2	Double Shadow / Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2461-1/-2	Couble Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2465-1/-2	Double Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2466-1/-2	Double Shadow / Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2478-1/-2	Double Shadow / Stealth(Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2479-1/-2	Double Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
B	CB2494-1/-2	Double Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
B	B2-100	Double Colt MKII Double
B	B3-100	Double Colt MKIII
B	B3T-100	Double Colt M3T (Magnum)

Burner category	Drawing number	Burner denotation
C	CB378	Triple MK.4
C	CB637-1/-2	Triple MK.4 'Super' (Vapour Pilot Light) / (Liquid Pilot Light)
C	CB663-1/-2	Triple MK.4 'Super' (Vapour Pilot Light) / (Liquid Plot Light)
C	B2-200	Double Colt MKII + Commercial Liquid Fire
C	B2-300	Triple Colt MKII
C	B3-200	Double Colt MKIII + commercial Liquid Fire
C	B3-300	Triple Colt MKIII
C	B3T-200	Double Colt M3T (Magnum) + Commercial Liquid Fire
C	B3T-300	Triple Colt M3T (Magnum) (2 Hose)
C	B3T-700	Triple Colt M3T (Magnum) (3 Hose)
D	CB452	Quad MK.4
D	CB616-1	Quad MK.4 'Super' (Vapour Pilot Light)
D	CB615-2	Quad MK.4 'Auper' (Liquid Pilot Light)
D	B2-400	Triple Colt MKII + Commercial Liquid Fire
D	B2-500	Quad Colt MKII
D	B3-400	Triple Colt MKIII + Commercial Liquid Fire
D	B3-500	Quad Colt MKIII
D	B3T-400	Triple Colt M3T (Magnum) + Commercial Liquid Fire (2 Hose)
D	B3T-500	Quad Colt M3T (Magnum) (2 Hose)
D	B3T-600	Quad Colt M3T (Magnum) (4 Hose)

Overview on combination of envelope with burner and basket types

Schroeder fire balloons envelope size	Applicable burner category	Applicable basket category
1200	B	B, C, D
1600	B	B, C, D, E, F, G
1800	B	B, C, D, E, F, G, H
2200	B	B, C, D, E, F, G, H, I
2600	B	B, C, D, E, F, G, H, I, J,
3000	B	B, C, D, E, F, G, H, I, J, K
3400-3600	B	C, D, E, F, G, H, I, J, K, L
4000-4250	B	D, E, F, G, H, I, J, K, L, M
4500	B, C	D, E, F, G, H, I, J, K, L, M, N
5000	B, C, D	E, F, G, H, I, J, K, L, M, N, O
6000	C, D	G, H, I, J, K, L, M, N, O, P, Q
7000	C, D	H, I, J, K, L, M, N, O, P, Q
8500	C, D	K, L, M, N, O, P, Q

Overview on applicable fuel cylinder:

Fuel cylinder	Empty weight [kg]	Content [Kg]	Total mass[kg]
VA 50	15	21	36
VA 70	18	29	47
V 20	14	20	34
V 30	19	27	46
V 30, high	18	29	47
V 40	21	36	58
Worthington-Alu	14	18	32
M20 or M20D	15	20	35
M30 or M30D	20	30	50
M40 or M40D	24	40	64

9. Correlation between basket measures, number of fuel cylinders and number of occupants

Remarks:

1. Basket measures may vary up to +/- 0,075 m
2. There must be at least 1 fuel cylinder per burner unit in every basket, if the units are equipped with a separate fuel input.
3. The calculation bases on 0,10 m² per fuel cylinder and 0,30 m² per occupant

The max. number of fuel cylinders is limited by the number of strapping arrangemnets in the basket.