



If a fuel leak cannot be controlled, shut off all fuel including the pilot light and brief passengers for a hard landing (Section 3.4).

Note: *If the main fuel hoses are removed from the support rod covers they are long enough to reach fuel cylinders at the opposite end of the basket.*

CAUTION: *Care should be taken when operating with the fuel hoses outside of the support rod covers, as the liquid fuel pressure can cause the hose to deflect when the blast or whisper valve is operated. This may change the direction of the burner and flame.*

9.3.4 Normal Procedures

No Change

9.3.5 Weight Calculations

No Change

9.3.7 Balloon System and Description

9.3.7.5 Burners

Refer to the applicable Cameron Flight Manual or flight manual supplement 8.22 for out of production burners or flight manual supplement 8.51 for the Stratus Neo burners.



9.3 Cameron Burners with Kavanagh Envelopes, Load Frames & Baskets

9.3.1 Approval details

Approved By

~~XXXXXXXXXX~~
 Civil Aviation Safety Authority Australia
 RICHARD STECKER
 DELEGATE OF THE AUTHORITY
 19 NOVEMBER 2019

Approval Date

9.3.2 General Information

Issue 4 of this supplement has 8 pages.

This supplement covers the use of Cameron burners with Kavanagh Envelopes and is used with configurations approved under Supplemental Type Certificate ASL045SY.

STC ASL045SY may be applied to all Kavanagh models covered by Type Certificates VL501, VL502, VL503, VL504, VL505, VL506 and VL507

For simplicity, all burners shall hereafter be referred to as Cameron burners as they are covered by the same Cameron Flight and Maintenance Manuals.

9.3.2 Limitations

9.3.2.6 Minimum burner requirements

Refer to Table 13 in this supplement for the approved Cameron burner groups for each Kavanagh envelope model.



9.3.2.7 Fuel

1. The fuel pressure must never exceed the system safe working pressure of 15 Bar (218psi).
2. The minimum fuel pressure is 3bar (44psi) for balloons smaller than 340,000cu.ft (9630m3).

CAUTION: *Care should be exercised if the fuel pressure is below 5.5bar (80psi).*

3. The minimum fuel pressure is 7bar (102psi) for balloons of 340,000cu.ft (9630m3). and larger, unless Shadow, Sirocco or Stratus burners are used, when the minimum fuel pressure is 5.5bar (80psi)

9.3.3 Emergency Procedures

9.3.3.8 Pilot light failure

If a pilot light is extinguished for any reason, it should be relit.

Each burner unit is fitted with a pilot light, single burners having two independent pilot lights. All burners will operate with one failed pilot light. The failed pilot light should be turned off and a landing made as soon as possible.

On double burners or pairs of burners the crossflow valve, if fitted, should be opened to ensure reliable ignition of both burners from the remaining pilot light. If the pilot light fails on the single unit of a triple burner then control should be maintained on another burner.

If all pilot lights fail the following procedure should be adopted-

1. Shut off all fuel supplies at the cylinder valve.
2. Lock one whisper burner valve (Shadow, Stealth and Sirocco burners) fully open or lock one main burner valve open using the blast valve latch (Stratus Burner).
3. Partially open the fuel supply to this burner at the cylinder valve, to permit a small amount of fuel to enter the burner.
4. Light the burner with a match or other igniter.



WARNING: *do not use the igniter built into the burner, as it will not ignite the fuel*

5. Fully open the fuel supply to the burner, using the cylinder liquid valve to control the flight of the balloon.
6. Partially close the cylinder liquid valve to a fractional setting, regulating the burner to maintain a pilot setting.
7. Land as soon as possible.

Note: *Do not leave one cylinder providing the pilot setting, with main fuel taken from another, because prolonged restricted flow of liquid will cause freezing of the valves.*

9.3.3.9 Main burner failure

Burner Unit Malfunction- Transfer control to another burner unit or to the other fuel supply (single burner).

Shut off the fuel supply to the defective burner unit at the cylinder valve.

Vent fuel from the defective burner unit and supply hose.

Land as soon as possible.

Note: *if the blast valve fails in the open position, its flow can be controlled by opening and closing the cylinder valve (liquid offtake).*

Crossflow Valve Leak (Stealth, Shadow and Stratus burners only)- Close the two blast valves connected by the crossflow valve.

Transfer control to the whisper burners or burners not connected by the crossflow valve. Land as soon as possible.

Note: *Crossflow valve leaks are only evident with the main burner operating.*



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9.3.7.12 Equipment list

The following table lists the applicable Cameron burner that may be used in combination with a Kavanagh envelope.

9.3.7.12.1 Envelope list

TABLE 13 - Kavanagh Envelopes with Cameron burners

Model	Cameron burner
B-77	A, A ¹ , B, B ²
B-105	B, B ²
B-350	D, D ⁴
B-400	D, D ⁴
B-425	D
C-56	A, A ¹ , B, B ²
C-65	A, A ¹ , B, B ²
C-77	A, A ¹ , B, B ²
D-77	A, A ¹ , B, B ²
D-84	A, A ¹ , B, B ²
D-90	A, A ¹ , B, B ²
D-105	B, B ²
E-120	B, B ² , C, C ³
E-140	B, B ² , C, C ³
E-160	B, B ² , C, C ³
E-180	B, B ² , C, C ³
E-210	B, C, C ³
E-240	C, C ³ , D, D ⁴
E-260	C, C ³ , D, D ⁴
E-300	C, C ³ , D, D ⁴
EX-60	A, A ¹ , B, B ²
EX-65	A, A ¹ , B, B ²
EX-70	A, A ¹ , B, B ²
EX-77	A, A ¹ , B, B ²
EX-90	A, B, B ²
G-450	D
G-525	D

**9.3.7.12.2 Burner List**

Refer to the applicable Cameron Flight Manual, Section 9 Table 8 or flight manual supplement 8.22 Table 10 for out of production burners or flight manual supplement 8.51 Table 8 for the Stratus Neo burners.

9.3.7.12.3 Load frame List

Refer to the Kavanagh Balloons equipment list for load frames as per 7.12.3.

Alternately for Cameron load frames refer to the applicable Cameron Flight Manual, Section 9 Table 6 and ensure that the following conditions are met.

1. The Cameron load frame may only be used on Kavanagh Baskets where a Kavanagh Group A or B load frame is applicable.
2. The Cameron load frame length and width must be within +/- 60mm of the applicable Kavanagh Group A or B load frame.
3. The Cameron load frame part/drawing number must be identified in the Cameron Flight Manual equipment list as being compatible with a Cameron envelope of the same or greater MTOM.
4. The Kavanagh burner support poles must be used. The support poles will be of an appropriate length and with one end reduced in diameter to 24mm to fit the Cameron load frame pole sockets.



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