

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

8.22 OUT OF PRODUCTION BURNER MODELS

8.22.1 GENERAL INFORMATION

This supplement was originally approved by EASA as Supplement 5, Amendment 1 to Flight Manual Issue 9 under approval number 2004-11920 on 9 December 2004

Issue 2 of this supplement has eight pages.

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

8.12.1.1 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 Paragraph 22.6.3.10.1. Burner Assemblies CB2051, CB2065, CB2081, CB2089, CB2095, CB2096, CB2097, CB2130, CB2145, CB2298, CB2299 added	1,3 and 8	18-04-07	Approved by EASA under Approval Number EASA.BA.C.01075

8.22.2 LIMITATIONS

8.22.2.4 Minimum Burner Requirements

1. A single Cameron Mk 3 burner may only be used in balloons of less than 90,000 cu ft (2549 m³).
2. The following double burners may only be used in balloons of 56,000 cu ft (1585 m³) to 180,000 cu ft (5098 m³). Cameron Mk 3, Cameron Mk 4, Colt Mk II(C2), Colt Mk III(C3) and Colt Mk IIIT (C3-T, Magnum).
3. Triple Cameron Mk 4 burners may only be used in balloons of 140,000 cu ft (3970 m³) to 300,000 cu ft (8496 m³).
4. The following quad (and triple with Commercial Liquid Fire) burners may only be used in balloons of 180,000 cu ft (5100 m³) to 400,000 cu ft (11328 m³). Cameron Mk 4, Colt C2, Colt C3 and Colt Magnum.

8.22.3 EMERGENCY PROCEDURES

8.22.3.11 Pilot Light Failure

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 / liquid fire burner valve (if fitted) fully open, or lock one main burner valve fully open.
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)**
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.

8.22.4 NORMAL PROCEDURES

No change.

8.22.5 WEIGHT CALCULATIONS

No change.

8.22.6 BALLOON AND SYSTEMS DESCRIPTION

8.22.6.3 Burner

The Cameron Mk 3, Cameron Mk 4, Cameron Mk 4 Super, Colt C2, Colt C3 and Colt Magnum burners do not follow the current convention for colour-coded controls. Care must be taken during use to ensure that the correct control is being operated.

8.22.6.3.10.1 Sirocco Double Burner (additional)

Originally, the Sirocco double burner was produced without the double action handle (Part Number CB2698 or CB2699). All other details are identical to later versions.

8.22.6.3.15 Cameron Mk 3 Burner

The Mk 3 burner has a stainless steel vapourising coil which is fitted with jets and deflector plates.

At least two liquid fuel supplies are always fitted, which feed the coils via Rego blast valves. The blast valves may be retro-fitted with a Bonanno-modified valve centre-body.

A pressure gauge is fitted in the liquid fuel line between the blast valve and the coil, and reads only when the blast valve is operated.

A whisper burner may be retro-fitted, and consists of a needle or ball valve which feeds from the inlet of the Rego blast valve and has a jet at the centre of the coil.

A vapour pilot light is fitted, which is controlled from the vapour valve on the cylinder.

The Mk 3 single burner has two liquid fuel supplies and blast valves feeding one pressure gauge and coil. The single burner is fitted with a single pilot light.

The burner may be fitted either in a stainless steel frame or a red painted steel frame.

The Mk 3 burner is available in single and double burner combinations.

8.22.6.3.16 Cameron Mk 4 Burner

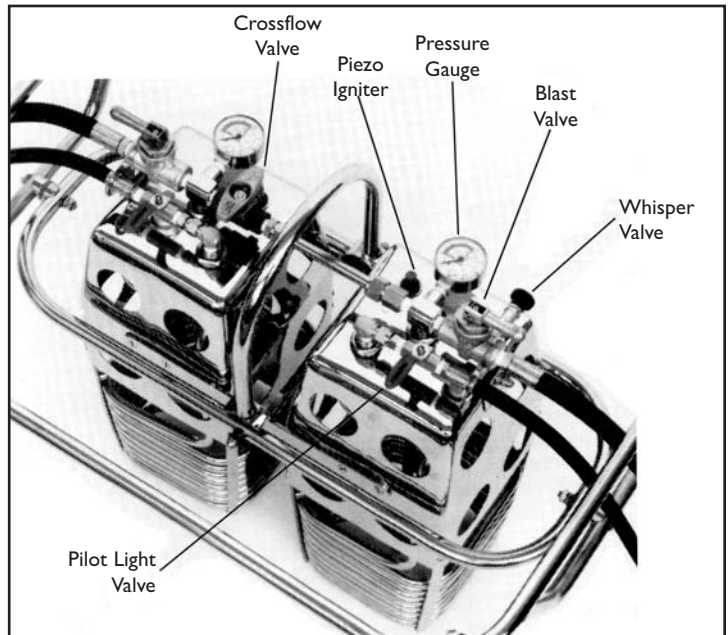
The Mk 4 burner has a stainless steel vapourising coil and can, and is similar in appearance to the Shadow burner.

At least two liquid fuel supplies are always fitted, which feed the coils via Rego blast valves. The blast valves may be retro-fitted with a Bonanno-modified valve centre-body. The blast valve may also be a ball valve instead of a Rego valve.

A pressure gauge is fitted in the liquid fuel line between the blast valve and the coil, and reads only when the blast valve is operated.

At least one whisper burner is fitted, which may be operated by either a ball valve or a needle valve.

A vapour pilot light is fitted, which is controlled by a ball valve on the burner. The pilot light is ignited using a piezo-electric igniter fitted to the can.



▲ Cameron Mk IV Burner

A crossflow is fitted between paired burners, connecting them with a ball valve. The crossflow allows two burners to be operated with one blast valve. Maximum burner power will not be achieved with the crossflow open however, due to flow limitations in the fuel system.

The Mk 4 single burner has two liquid fuel supplies and blast valves feeding one pressure gauge and coil. The single burner is fitted with a single pilot light.

The Mk 4 burner is available in single, double, triple and quad combinations.

An electric valve option may be fitted which allows the burner to be operated remotely. A solenoid valve feeds fuel into the crossflow port, operated by a hand-held remote operating switch.

8.22.6.3.17 Cameron Mk 4 Super Burner

The Mk 4 Super burner has the same can and coil as the Mk 4 burner, and differs in the arrangement of the burner controls.

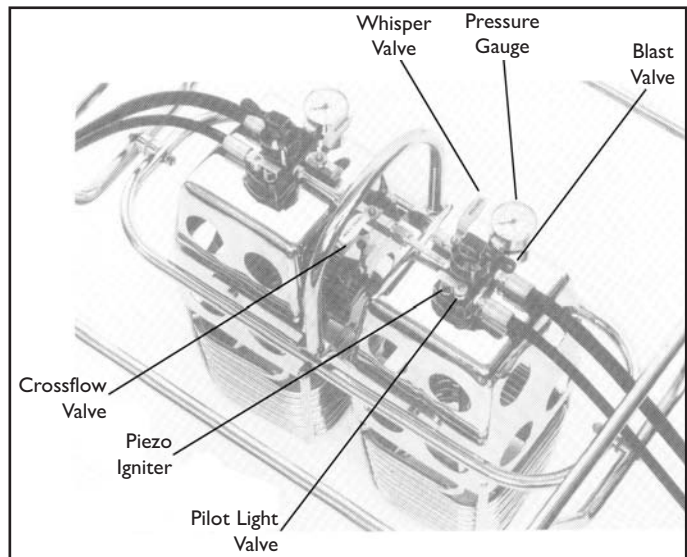
A manifold block is fitted to the base of the can, which incorporates the blast valve, the whisper valve, the pilot light valve, the piezo-electric igniter and the fuel pressure gauge.

The blast valve is operated by a toggle handle on the bottom of the manifold block

The whisper burner is operated by a ball valve on the side of the manifold block.

The pressure gauge reads continuously when the fuel supply is on at the cylinder. When the burner is operated, the indicated pressure drops slightly.

The pilot light handle covers the piezo igniter button when in the closed position, preventing accidental operation of the igniter.



▲ Cameron Mk IV Super Burner

The burner is fitted as standard with a vapour pilot light, but may optionally be fitted with a liquid fed pilot light which draws its fuel from the main liquid supply. The liquid pilot light has a needle valve which allows the size of the pilot flame to be adjusted.

A crossflow is fitted between double burners and paired burners in triple and quad configurations.

The Mk 4 Super burner is available in double, triple and quad combinations.

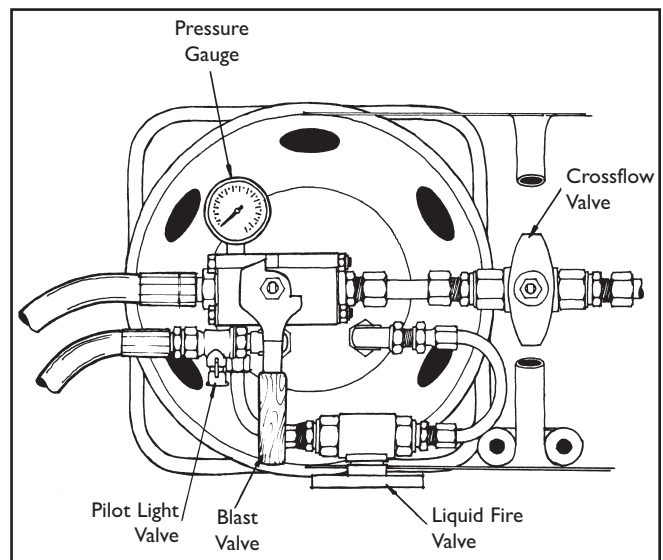
An electric valve option may be fitted which allows the burner to be operated remotely. A solenoid valve feeds fuel into the crossflow port, operated by a hand-held remote operating switch.

8.22.6.3.18 Colt Mk II (C2) Burner

The burner controls are fitted to the bottom of the burner can.

The main burner is controlled by a lever or toggle operated ball valve. A crossover valve may be fitted to allow operation of two burner units with one blast valve.

A vapour pilot light is fitted, and is either controlled by a toggle ball valve on the burner, or directly by the fuel cylinder valve. Ignition is either by an external sparker, or by a piezo igniter built into the burner.



▲ Colt C2 Burner

The liquid fire / whisper burner is operated by a toggle ball valve on the burner can.

Multiple burners may be fitted with a 'Commercial Liquid Fire' which consists of a separate burner unit fitted with only liquid fuel jets, controlled by a toggle ball valve.

The C2 burner is available in single, double, triple or quad configurations.

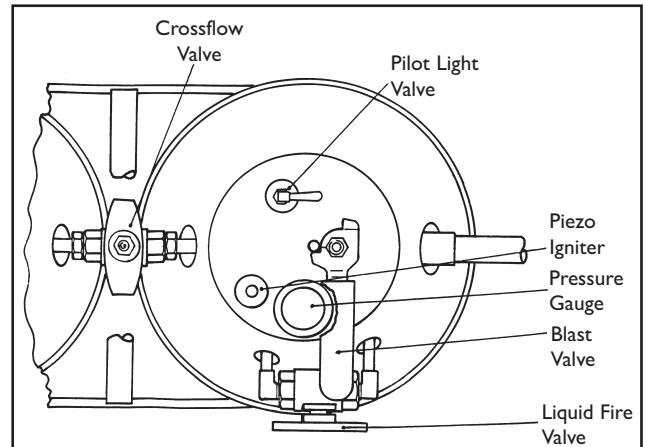
8.22.6.3.19 Colt Mk III (C3) Burner

The C3 burner is very similar to the C2 burner. The blast valve ball valve is mounted inside the burner can, and a liquid pilot light can be fitted.

The main burner is controlled by a lever or toggle operated ball valve.

A liquid or vapour pilot light is fitted, and is controlled by a toggle ball valve on the burner. Ignition is by a piezo igniter built into the burner.

The liquid fire / whisper burner is operated by a toggle ball valve on the burner can.



▲ Colt C3 Burner

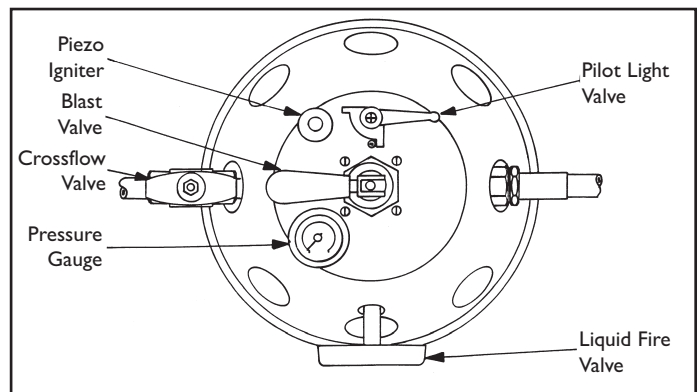
Multiple burners may be fitted with a 'Commercial Liquid Fire' which consists of a separate burner unit fitted with only liquid fuel jets, controlled by a toggle ball valve.

The C3 burner is available in single, double, triple or quad configurations.

8.22.6.3.20 Colt Mk III T (Magnum) Burner

The Magnum burner is a development of the C3 burner. The blast valve is a specially designed 'Superseal' valve rather than a standard ball valve, and is operated by a vertical toggle handle.

A liquid or vapour pilot light is fitted, and is controlled by a toggle ball valve on the burner. Ignition is by a piezo igniter built into the burner.



▲ Colt Magnum Burner

The liquid fire / whisper burner is operated by a toggle ball valve on the burner can.

Multiple burners may be fitted with a 'Commercial Liquid Fire' which consists of a separate burner unit fitted with only liquid fuel jets, controlled by a toggle ball valve.

The Magnum burner is available in single, double, triple or quad configurations.

8.22.7 BALLOON MAINTENANCE, HANDLING AND CARE

No change.

8.22.9 EQUIPMENT LIST

Table 10 - Burners

Burner Category	Drawing Number	Burner Description
A ¹	CB200	Single Mk 3
A	CB391	Single Mk 4
A	CB2130-1/-2	Single Shadow
A	B2-75	Single Colt C2 Plus
²		
B ²	CB205	Double Mk 3
B ²	CB392	Double Mk 4
B ²	CB451	Double Mk 4
B ²	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	Double 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	CB2698	Double Sirocco
B ²	CB2699	Double Sirocco
B ²	B2-100	Double Colt C2
B ²	B3-100	Double Colt C3
B	B3T-100	Double Colt C3T (Magnum)

¹ Not to be used with balloons larger than 90,000 cu.ft.

² Not to be used with balloons larger than 180,000 cu.ft.

Table 10 - Burners (Continued)

Burner Category	Drawing Number	Burner Description
C ³	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 Pilot Light)
C	CB2051-1/-2	Triple Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
C	CB2081-1/-2	Triple Mk 4 Super (Vapour Pilot Light) / (Liquid Pilot Light)
C	CB2089-1/-2	Double Shadow / Single Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
C	CB2095-1/-2	Double Stealth / Single Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
C	CB2096-1/-2	Triple Mk 4 Super - Solenoid (Vapour Pilot Light) / (Liquid Pilot Light)
C ³	CB2298-1/-2	Triple Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
C	B2-200	Double Colt C2 + Commercial Liquid Fire
C	B2-300	Triple Colt C2
C	B3-200	Double Colt C3 + Commercial Liquid Fire
C	B3-300	Triple Colt C3
C	B3T-200	Double Colt C3T (Magnum) + Commercial Liquid Fire
C	B3T-300	Triple Colt C3T (Magnum) (2 Hose)
C	B3T-700	Triple Colt C3T (Magnum) (3 Hose)
D ⁴	CB452	Quad Mk 4
D	CB616-1/-2	Quad Mk 4 Super (Vapour Pilot Light) / (Liquid Pilot Light)
D ⁴	CB2065-1/-2	Quad Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
D	CB2097-1/-2	Double Stealth / Double Shadow (Vapour Pilot Light) / (Liquid Pilot Light)
D	CB2145-1/-2	Quad Shadow - Solenoid (Vapour Pilot Light) / (Liquid Pilot Light)
D ⁴	CB2299-1/-2	Quad Stealth (Vapour Pilot Light) / (Liquid Pilot Light)
D ⁴	B2-400	Triple Colt C2 + Commercial Liquid Fire
D ⁴	B2-500	Quad Colt C2
D ⁴	B3-400	Triple Colt C3 + Commercial Liquid Fire
D ⁴	B3-500	Quad Colt C3
D ⁴	B3T-400	Triple Colt C3T (Magnum) + Commercial Liquid Fire (2 Hose)
D ⁴	B3T-500	Quad Colt C3T (Magnum) (2 Hose)
D ⁴	B3T-600	Quad Colt C3T (Magnum) (4 Hose)

³ Not to be used with balloons larger than 300,000 cu.ft.

⁴ Not to be used with balloons larger than 400,000 cu.ft.