

SUPPLEMENT 30

‘THUNDER & COLT’ BASKET, BURNERS AND CYLINDERS WITH ULTRAMAGIC ENVELOPES

The technical content of this document is approved under the authority of the DOA, ref.: EASA.21J.351.

30.1 GENERAL INFORMATION

This supplement is issued to cover additional actions to be taken to safely and efficiently use Thunder & Colt baskets, burners and cylinders with Ultramagic envelopes.

30.2 LIMITATIONS

30.2.2 Meteorological Limitations

The balloon must not be flown in meteorological conditions which could give rise to erratic winds and gusts of 10 knots (5.1 m/s) above the mean wind speed.

30.2.5 Fuel

The fuel pressure must never exceed the safe working pressure of 15 bar (218psi). The table below is to be followed:

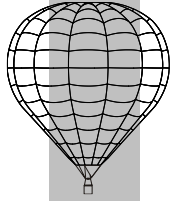
	Balloons < 340,000 ft ³ (9630 m ³)	Balloons > 340,000 ft ³	Balloons >340,000 ft ³ using Stratus burners
MAX fuel Pressure	15 bar (215 psi)	15 bar (215 psi)	15 bar (215 psi)
MIN fuel Pressure	3 bar (44 psi)	7 bar (102 psi)	5.5 bar (80 psi)

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

29.2.15 Other manufacturers equipment

The burners and baskets manufactured by Thunder & Colt which may be used in combination with Ultramagic envelopes are listed in section 30.8

The equipment must be identifiable as an FAA type certified vehicle with the applicable Type Certificate Data Sheets B2EU and/or B3EU.



30.3 EMERGENCY PROCEDURES

30.3.2 Substitute - Pilot Light Failure

1. Check that the valves on the cylinder and burner (if fitted) are open.
2. Check that the pilot light hoses are properly connected to the cylinder.
3. Re-light the pilot light.
4. If only one pilot light re-lights land as soon as possible when safely to do so.
5. If both pilot lights fail and cannot be re-lit, proceed as follows.

- **IF THE BURNER HAS A LIQUID FIRE USING A BALL VALVE:**
Open the liquid fire ball valve a crack and use this as the pilot light for the main burner until an emergency

If the burner has a liquid fire, open a crack and use this as the pilot light for the main burner until an emergency landing can be safely completed.

- **IF NOT:**

Alternative 1 - *Burners with Worcester-type Blast Valves*

Crack one blast valve partially open and ignite the propane directly on the jets. Adjust the valve to give a flame approximately 1ft (30cm) high. Leave this flame to act as a pilot light. Fly on the other burner and land as soon as possible.

Alternative 2 - *Burners with Rego or Non Worcester-type Blast Valves*

Crack the blast valve open and light directly on the main jet. Open blast valve fully while slowly closing cylinder valve until only approximately 1ft (30cm) flame remains. For Status burners lock one main burner valve open using the blast valve latch.

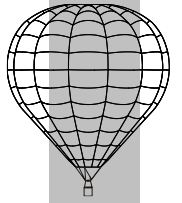
Leave flame at this stage to act as a pilot light and fly on the alternative burner until an emergency landing can be safely completed.

Note: continuous operation of a propane valve open at very low settings will result in some freezing and is only satisfactory for short periods of time - LAND AS SOON AS POSSIBLE.

30.4 NORMAL PROCEDURES

30.4.5.2 Rigging the basket and burner

Thunder & Colt burner frames are similar to Ultramagic. Assembly is therefore similar to that of an Ultramagic and the same checks should be carried out.



30.5 LOADING

No change

30.6 BALLOON AND SYSTEM DESCRIPTION

30.6.2.2 Burner and burner frame

Refer to applicable Thunder & Colt Flight Manual approved for use in the USA as listed on TCDS B2EU, B3EU.

30.6.2.3 Basket

Refer to applicable Thunder & Colt Flight Manual approved for use in the USA as listed on TCDS B2EU, B3EU.

30.6.2.4 Fuel Cylinders

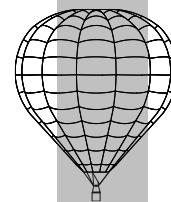
Refer to applicable Thunder & Colt Flight Manual approved for use in the USA as listed on TCDS B2EU, B3EU.

30.7 BALLOON MAINTENANCE, HANDLING AND CARE

Refer to applicable Thunder & Colt Maintenance Manual approved for use in the USA as listed on TCDS B2EU, B3EU.

30.8 OTHER MANUFACTURERS EQUIPMENT

30.8.3 (Add the table from next page)



THUNDER & COLT BASKETS, BURNERS and CYLINDERS

Basket Size (inches)	Type	Empty Mass (kg)	UM Envelope size range
40 x 40	Open	48	42-77
40 x 48	Open	57	56-90
40 x 54	Open	67	65-105
40 x 60	Open	69	77-120
48 x 68	Open	105	105-160
48 x 82	P	132	120-160
60 x 87	ST	160	160-180
60 x 90	ST	170	180-210
60 x 102	ST	206	180-250
60 x 98	DT	252	180-250
60 x 118	DT	284	180-425
60 x 126	DT	415	180-425

Burner Type	Mass (kg)	UM Envelope size range
C2 Single / Single Plus	13	31 - 77
C2 Double	17	42-160
C2 Triple	25	120-210
C2 Triple + CLF	26	180-300 ¹
C2 Quad	28	180-425 ²
Magnum/Stratus Double	22	56-210 ³
Magnum/Stratus Double + CLF	23	120-210 ⁴
Magnum/Stratus Triple	28	105-250
Magnum/Stratus Triple +CLF	31	150-300 ¹
Magnum/Stratus Quad	37	180-425 ²

¹ Not exceeding a MTOM of 2,857 kg

² Not exceeding a MTOM of 3,628 kg

³ Not exceeding a MTOM of 1,633 kg

⁴ Not exceeding a MTOM of 2,041 kg

Cylinder Type	Empty Mass (kg)	Fuel Capacity (kg)	Basket range
Worthington	14	20	All
V 20	14	20	All
V 30	18	30	All
V 40	20	40	All

Notes :

- Dimensions of the basket are external in the base.
- ST means Single Partition and DT Double Partition.
- UM envelope sizes are given in thousands of cubic feet, so 65 mean 65000 ft³.