

Approved by EASA under Approval Number 10034058

## 8.14 CLOUDHOPPER MILLENNIUM

### 8.14.1 INTRODUCTION

This supplement shall be inserted in the Flight Manual, in Section 8: 'Supplements' with the revisions record sheet amended accordingly.

Information contained herein supplements, or in the case of conflict, supersedes that contained in the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Hot Air Balloon Flight Manual.

Issue 2 of this supplement has six pages.

Supplement 7.14 (two pages) to Maintenance Manual Issue 10 is required to ensure continued airworthiness.

### 8.13.2 LIMITATIONS

#### 8.13.2.2 Weather

1. The balloon must not be flown free in surface winds greater than 8 kts (4.1 m/s).
3. The atmosphere must be stable.

#### 8.14.2.7 Crew

3. The maximum number of occupants permitted in the Cloudhopper is one.

#### 8.14.2.10 Rates Of Climb And Descent

1. The rate of descent should not exceed 800 ft/min (4.0 m/s)

#### 8.14.2.16 Cylinders

1. All Aluminium (Worthington) cylinders shall be equipped with an outer, water resistant protective layer at least 25mm thick made from structural cellular foam or similar material.

### 8.14.3 EMERGENCY PROCEDURES

#### 8.14.3.8 Preparation For A Hard Landing

To reduce the severity of the impact avoid any use of the parachute vent and jettison any surplus weight. Absorb the landing impact parachute style with legs together and knees bent.

#### 8.14.3.10 Burner Failure

Shut off fuel to the burner at the cylinder valve.

Prepare for a hard landing (Section 3.8).

#### 8.14.3.11 Pilot Light Failure

If the pilot light fails the following procedure should be adopted-

1. Shut off the pilot light.
2. Partially open the whisper burner valve.
3. Light the burner with a match or other igniter. (WARNING- do not use the igniter built into the burner)
4. Use the whisper burner valve to control the flight of the balloon.
5. Partially close the whisper burner valve to a fractional setting, to maintain a pilot setting.
6. Land as soon as possible.

### 8.14.4 NORMAL PROCEDURES

#### 8.14.4.3.2 Basket Rigging

Strap on the fuel cylinder and lay the Cloudhopper on its back. The upper cylinder strap **MUST** be around the shoulder of the cylinder to prevent upward movement.

#### 8.14.4.4.2 Hot Inflation

Hot inflation should be performed by standing astride the Cloudhopper and lifting it by the back frame cross bar. When the burner is aligned with the envelope mouth apply heat using the main blast burner. Allow the Cloudhopper to come upright as the envelope rises.

The pilot should sit in the harness as soon as the balloon is stood up, and the harness should be fastened as soon as the pilot is in the seat. (Refer to figure 2).

#### 8.14.4.5 Take-Off

##### Pre-Take Off Checks

Swivel System      Operating correctly

Harness      Correctly fitted and secure.

The Cloudhopper should be rotated so that the pilot is facing the direction of travel on take off.

During flight the pilot will normally be seated, but if required the standing position may be adopted by slipping forward off the seat. The pilots' weight is then supported by the two leg loops created by the leg straps passing through the red tape loops.

#### 8.14.4.6.3 Fuel Management

During flight the pilot should note the flight time and fuel contents (using the mirrors) at regular intervals. If at any time there is doubt about the amount of fuel remaining a landing should be made at the first available opportunity.

#### 8.14.4.7 Landing

##### 8.14.4.7.1 Approach To Land

At a height of about 20 feet (6m) the Cloudhopper must be rotated to face backwards to the direction of approach.

Turn off the pilot light.

##### 8.14.4.7.2 Touchdown

Touchdown should be absorbed with the legs, knees slightly bent and stood up in the harness.

On no account should legs be braced with knees straight as this may result in injury.

Do not release the harness until the envelope has fully deflated.

#### **8.14.4.12 TETHER OPERATION**

##### **8.14.4.12.2 Rigging**

If the Cloudhopper is to be flown on a tether, the tether line must be connected to one of the envelope karabiners at the swivel ring, not to any other point on the hopper unit.

#### **8.14.5 WEIGHT CALCULATIONS**

No change.

#### **8.14.6 BALLOON AND SYSTEMS DESCRIPTION**

##### **8.14.6.3 Burner**

The burner is a single burner unit, based around the Stratus type manifold block. Both the main burner and the Whisper burner are controlled by toggle type handles. These are identified by colour (blue - Whisper valve; red - main blast valve) and texture (smooth - Whisper valve; rough - main blast valve).

##### **8.14.6.5 Basket**

The Cloudhopper Millennium is constructed around a stainless steel tubular frame in two sections. These are pinned together before flight but can be separated for transportation.

The lower frame engages the fuel cylinder at the lower rim. The cylinder is then secured in position by two cylinder straps. The fuel cylinder can be any approved standard type, as the attachment does not require any modification to the cylinder.

The upper frame incorporates the burner unit, swivel system, envelope attachment and attachments for the pilot harness. All the structural elements are incorporated in an integrated welded assembly. Multiple load paths are provided in the design.

The fuel cylinder contents gauge is viewed in two adjustable mirrors fitted on the overhead frame. The mirrors can be adjusted by hand to suit any particular pilot / cylinder combination.

The pilot harness incorporating a four-point quick release box, seat and footrest is attached to the frame by two screw-gate karabiners and two screw-gate Quicklinks. The harness can be adjusted for size at the two shoulder straps.

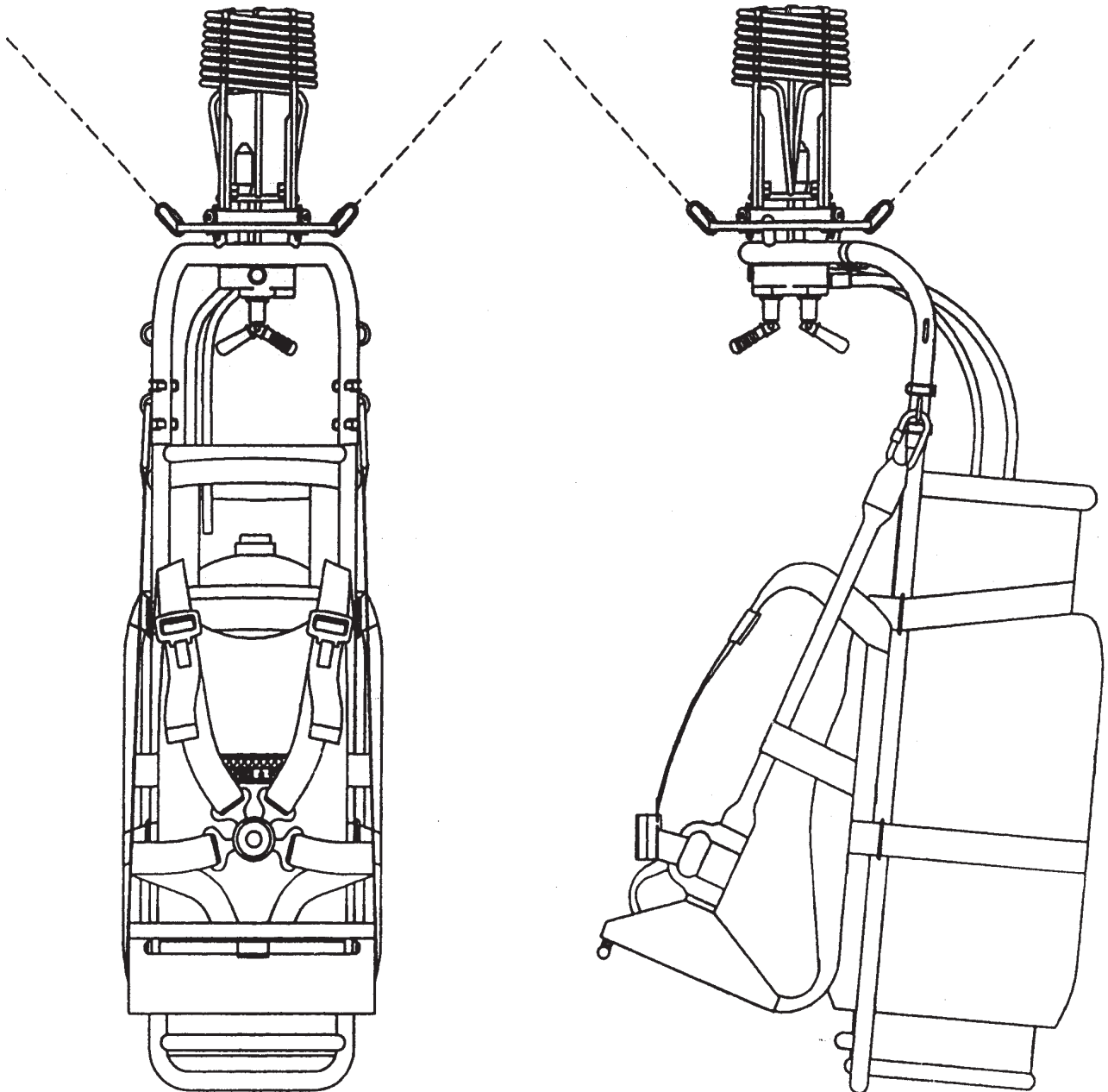
The pilot harness may be attached at either of two positions on the frame to suit both tall and short pilots, a zip built into the back panel allows it to be shortened at the same time. An adjustable footrest is also provided and may be stowed under the front edge of the seat when not required and during landing.

8.14.7 BALLOON MAINTENANCE, HANDLING AND CARE

To clean mud from the fuel cylinder jacket and Clouthopper harness, let the unit dry completely and then brush the mud away with a stiff brush.

**CAUTION: NEVER** clean the harness with strong solvent cleaners or other chemicals.

**CAUTION: NEVER** leave the harness wet or damp for prolonged periods.

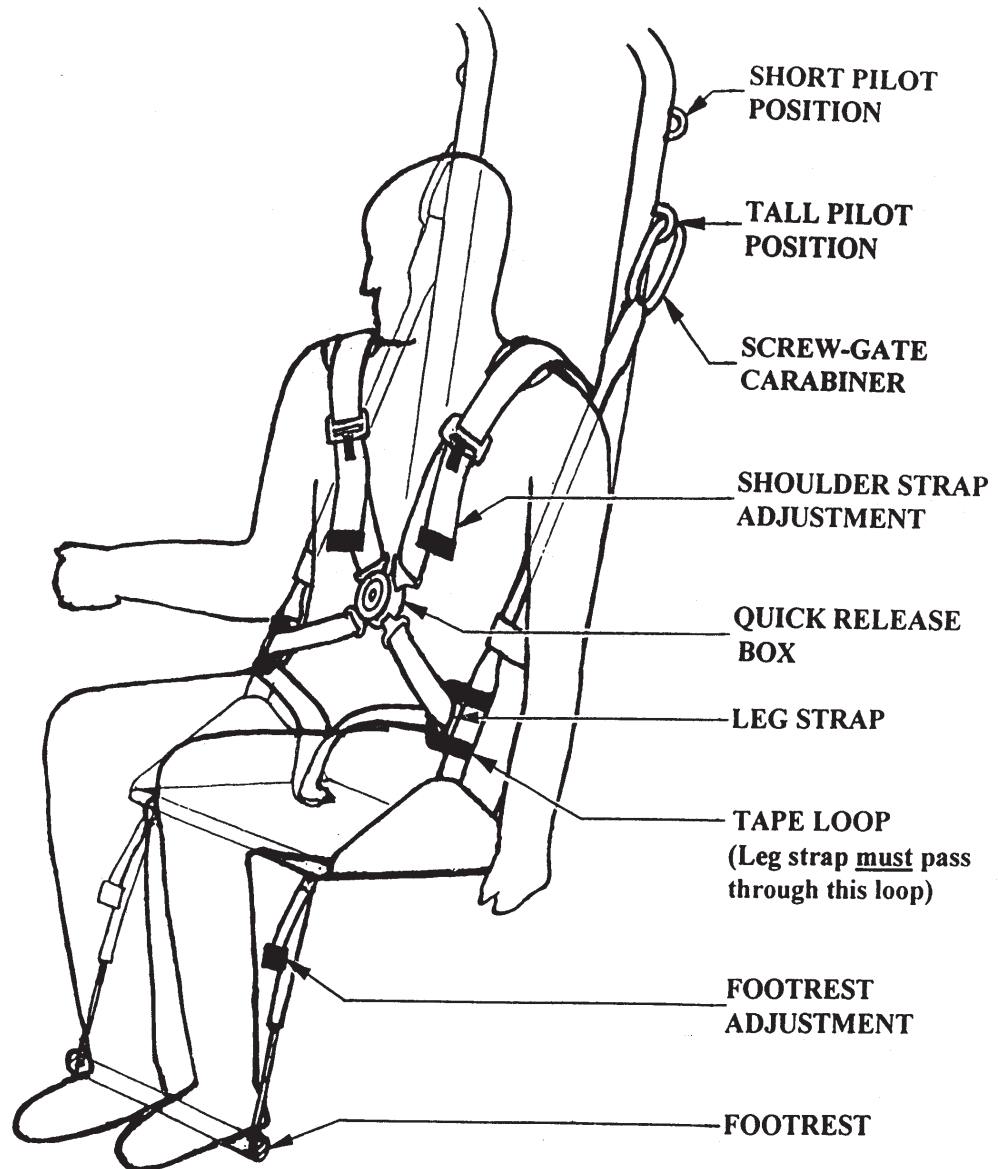


▲ Clouthopper General Arrangement

8.14.9 EQUIPMENT LIST

Basket Cat.	Drawing Number	Basket Description*	Applicable Cylinders	Applicable Burner Frames
A	CB8320	HOPPER	1, 2, 3	INTEGRAL

PILOT HARNESS



▲ [Cloudhopper Harness Detail](#)

### 7.14 CLOUDHOPPER MILLENNIUM

#### 7.14.1 GENERAL

No change.

#### 7.14.2 ENVELOPE REPAIRS

No change.

#### 7.14.3 BASKET REPAIRS

##### 7.14.3.1 Routine Maintenance

Clean the frame and harness regularly.

##### 7.14.3.7 Basket Frames

Cameron Balloons Ltd. should be contacted for advice if the frame is cracked or the tubing is distorted.

#### 7.14.4 FUEL SYSTEM REPAIRS

No change.

#### 7.14.5 INSTRUMENT REPAIRS

No change.

## 7.14.6 INSPECTION SCHEDULE

## 7.14.6.15 BASKET

11.	Check the frame for distortion and the welds for any signs of cracking.	
12.	Check the harness attachment lugs for any cracking..	
13.	Check the swivel system for correct operation and fastening of all bearings and rollers.	
14.	<b>Harness:</b> Check function of buckles. Check webbing for wear, fading or damage. Check attachments are secure and free from wear or damage.	

## 7.14.6.17.4 Baskets

**Frame:** Check the frame for any distortion or cracking. Pay particular attention to the harness lugs and the frame joining pins.

**Harness:** Check the harness for wear or damage. Check that the buckle locks and releases correctly.

**Swivel System:** Check the swivel system for correct and smooth operation. Check the fastening of all the bearings and rollers. Check the swivel ring for damage caused by the envelope karabiners.

CN	Inspection Date	Inspectors Signature