

Service Instruction



1. General

(a) No.:	SI04
(b) Revision / Date	A/August 2013
(b)Title:	Launch Restraints
(c)Description:	Definition of recommended components for Launch Restraint systems
(d)Applicability:	EASA.BA.012 / EASA.BA.013
(e)Effectivity:	All CN

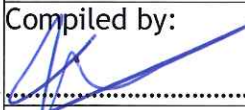
Note: Applicability= All types and variants to which the change can be applied.
Effectivity= Actual CN or group of CN's to which the bulletin has been/will be applied.

2. Accomplishment Instructions: see SI04 (eight pages) Attached

3. Materials: CB3574, CB3575, CB3576, CB3577

4. Other Publications Affected: None

5. Remarks: none


Compiled by: 	Notes:
Date: 22 August 2013	Name: F.J. Davies

6. Design Organisation Approval

Approval Statement

I hereby confirm that these instructions are in compliance with all the applicable airworthiness requirements. The technical content of this document is approved under the authority of DOA nr EASA.21J.140

Signed, for and on behalf of Cameron Balloons Ltd.


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Head of Design

Date: 22 Aug 2013 Name:



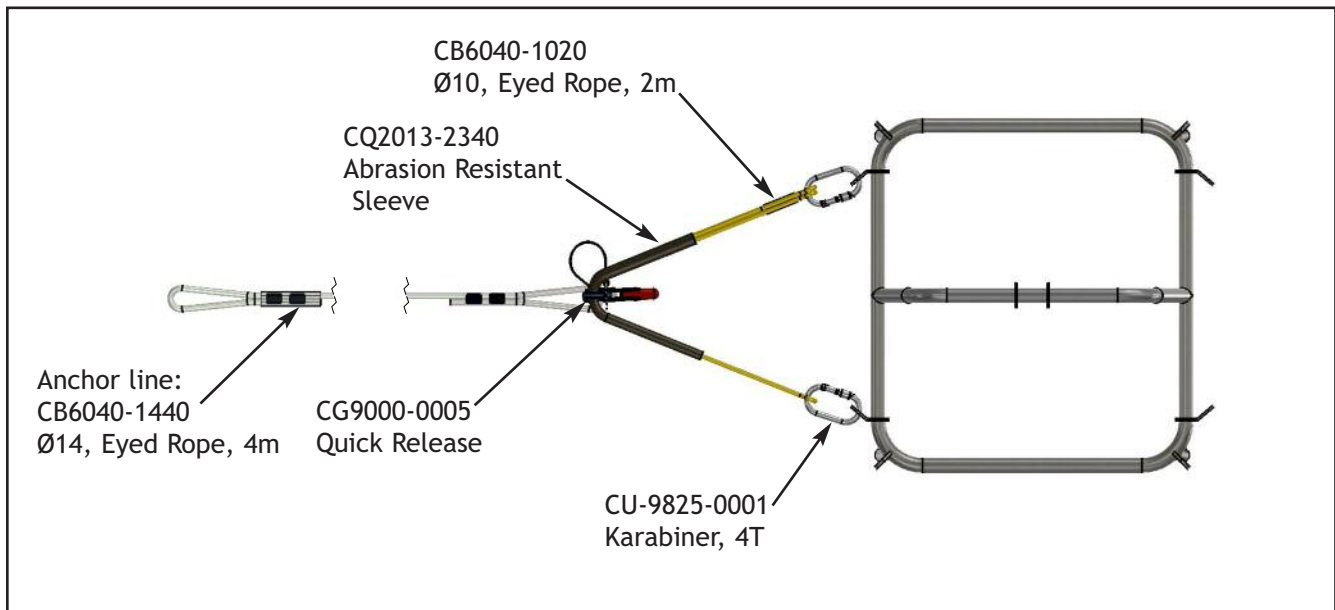
04.1 INTRODUCTION

This appendix provides guidance on the use of a launch restraint to temporarily restrain the balloon for the purpose of initiating a free flight. It describes practices that have been shown to be safe and effective but is not compulsory.

Warning: If a launch restraint is to be attached to envelope/basket karabiners, it is essential that they are orientated so that restraint karabiners must load the solid, not the screwgate side of the envelope karabiners.

04.2 LAUNCH RESTRAINT TYPE 1: STANDARD

For use with envelopes $\leq 120,000$ cu. ft (3 398 m³)

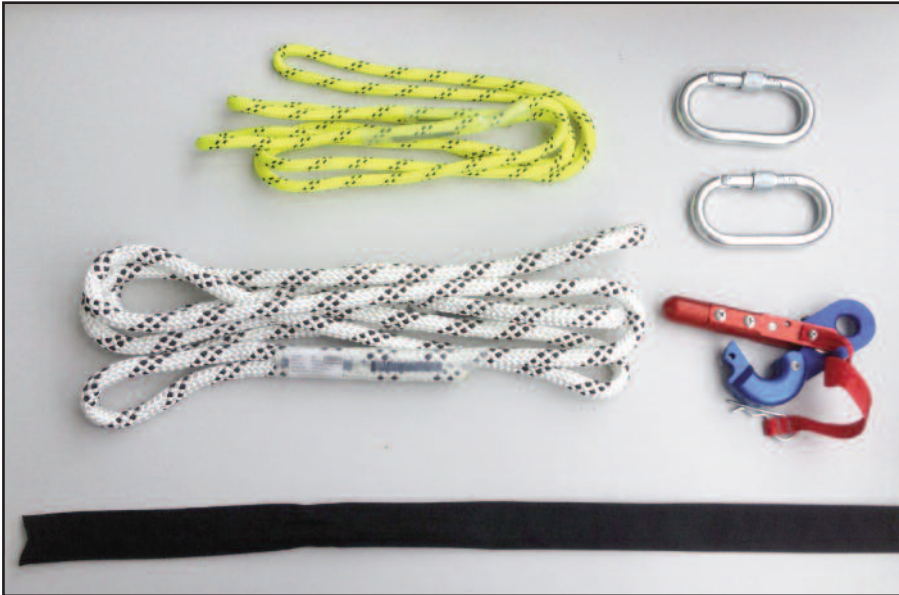


Launch Restraint-Type 1: CB3574

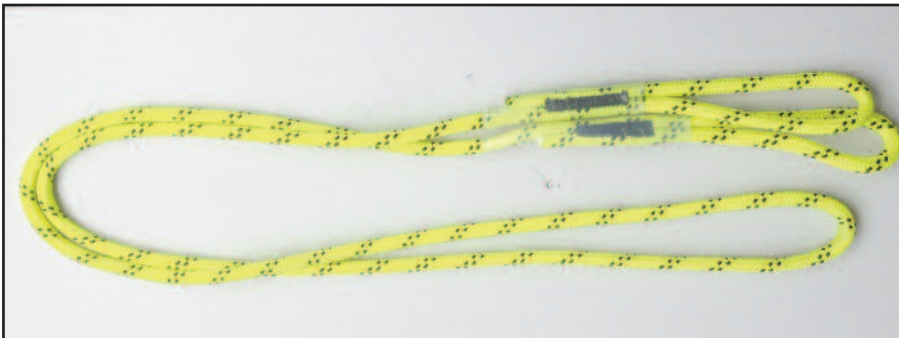
The ends of the 2 m rope should be connected to the restraint lugs on the upwind side of the burner frame. If restraint lugs are not fitted, the rope should be connected to the two uppermost karabiners during inflation. The rope should be folded in half so both eyes are threaded through the same karabiner (see rigging photos).

If karabiners are used to group flying wires together (additional to the karabiners on the basket cables), the restraint should be connected to the envelope karabiners. If tether rings are incorporated into the flying cables or added between the basket and envelope karabiners, the launch restraint should be attached to these rings.

A short anchor rope is best for maximum control, and is looped through the jaws of the latch.



Launch Restraint-Type 1: Kit ▲



Step 1: Lay out Rope ▲



Step 2: Fit abrasion resistant sleeve ▲



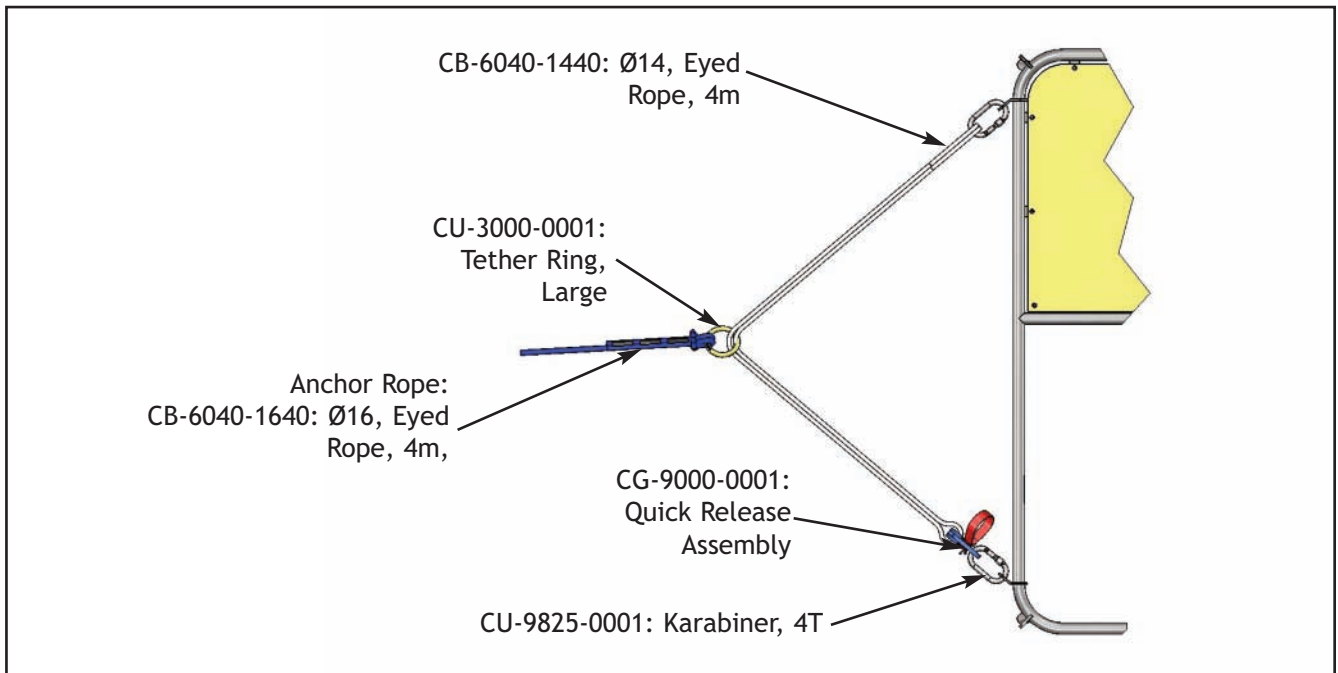
Step 3: Fit Quick Release and Karabiners (4t) ▲



Step 4: Attach anchor rope ▲

04.3 LAUNCH RESTRAINT TYPE 2: Y-TYPE

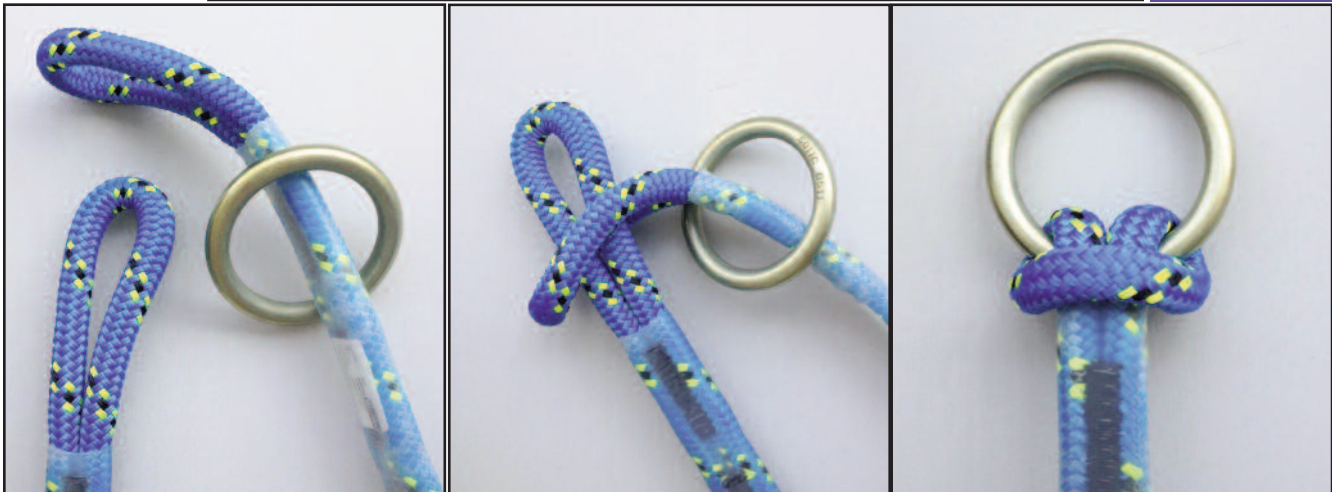
For use with envelopes $\leq 300,000$ cu. ft (8 496 m³) when mounted on the burner frame. The $\varnothing 16$ anchor rope is passed through the tether ring and through itself to create a loop around the ring. The $\varnothing 14$ rope is folded in half and passed through the ring. At one end both eyes are attached to a 4t karabiner which is attached to the burner frame. The loop is held in the jaws of the quick release. The quick release is attached to the burner frame with a second 4t karabiner.



▲ Launch Restraint-Type 2: CB3575



▲ Launch Restraint-Type 2: Rigging

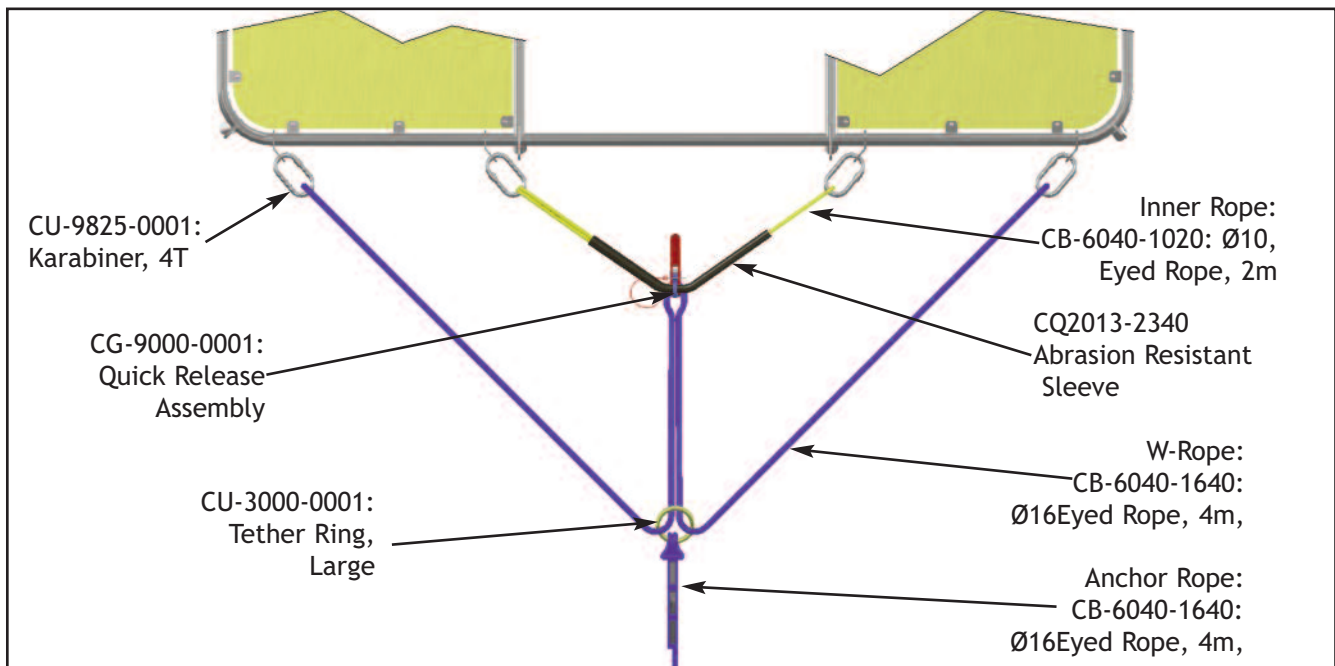


▲ Anchor Leg Rigging, Type 2, 3 and 4

04.4 LAUNCH RESTRAINT TYPE 3: W-TYPE,

For use with envelopes $\leq 750,000$ cu. ft (21 238 m³), burner frame (8 support rod)

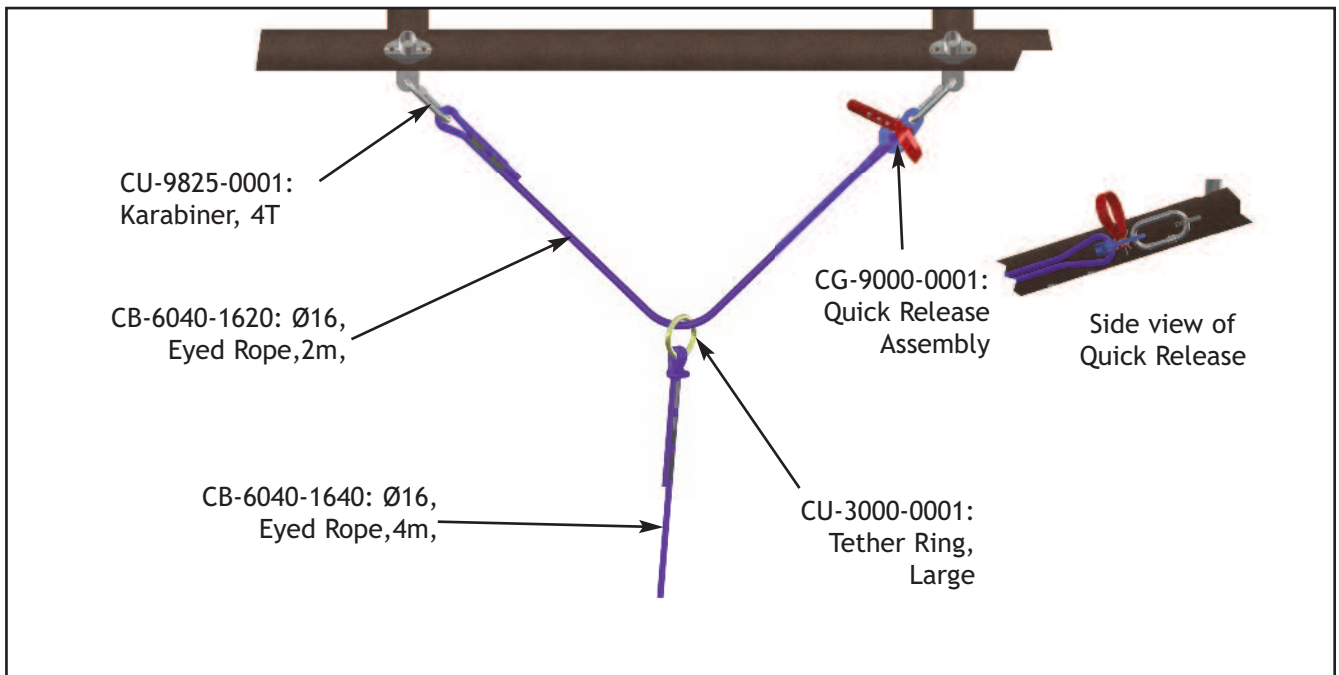
The two ends of the outer rope are connected to the outer lugs of the burner frame with 4t karabiners. The inner rope is connected to the inner lugs with 4t karabiners (Type 1 Launch Restraint). The Ø16 anchor rope is passed through the tether ring and through itself to create a loop around the ring (see Type 2 Launch Restraint). The centre of the outer rope is then pulled through the tether ring and held in the jaws of the quick release.



▲ Launch Restraint-Type 3: CB3576

04.5 LAUNCH RESTRAINT TYPE 4: Y-TYPE HEAVY DUTY

For use with envelopes $\leq 750,000$ cu. ft (21 238 m³), basket strong points.



▲ Launch Restraint-Type 4: CB3577



▲ Launch Restraint-Type 4: Rigging

04.6 GENERAL NOTES

1. All restraint kits are available with or without the anchor rope:

CB35XX-1 = Quick release kit assembly with anchor rope

CB35XX-2 = Quick release kit assembly with no anchor rope

2. For advice on rope care refer to:

<http://www.marlowropes.com/technical/ropecare-advice.html>

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