

Installation of Ballistic Parachutes

A recent defect reported to the CAA serves as a good reminder about correctly installing and checking your safety equipment.

In February 2018, a mistake was identified with the installation of a ballistic recovery system. An engineer had incorrectly connected a Kevlar® parachute strap when installing a system into a microlight aircraft.

This error was made and detected by the maintenance provider as they had procedures in place to check the installation.

The investigation revealed that a carabiner was clipped onto one of the 'looped folds' of the supplied Kevlar strap package (Figure 1).

Figure 1 Incorrect installation



Figure 2 Correct installation



Figure 3 Correct installation – but unfolded for clarity



If activated, this could have resulted in the rocket launching and pulling the Kevlar strap through the incorrectly fitted carabiner, therefore not deploying the parachute.

The maintenance provider advised the manufacturer of the error and suggested that the black heat wrap at each end of the strap be different colours to alert installers where the strap ends are (Figures 2 and 3).

Keep in mind...

Ballistic recovery systems can be found in a range of aircraft including microlights, light sport aircraft, amateur-built, and some type-certificated aircraft.

While BRS is a prominent brand, there is a range of other manufacturers. No matter what equipment you have, ensure the installation is completed as per the manufacturer's instructions, with guidance from your aircraft's manufacturer.

It's also important to note that, in the case of microlights, while the installation of a ballistic recovery system is not a major modification, it will affect the aircraft's weight and balance. Therefore, it will require the amendment of the aircraft's empty weight placard.

Extra care should also be taken during the ongoing maintenance of the ballistic recovery system, post-installation, to ensure it is still in good working order.

The maintenance provider's report illustrates the importance of carrying out checks of any installation and maintenance work you complete.

It's also a good reminder for all providers about the common factors related to these types of errors. These include distraction on the job, working in confined areas or in low light, and no or few checks of work completed.

The defect report, 18/661, can be read in GA Defects on page 26. ■



A complete ballistic recovery system showing the rocket (top), the canister holding the parachute, and the firing handle.