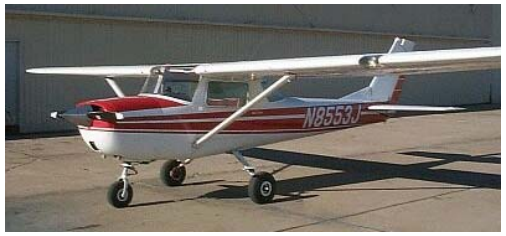
A CHECKLIST FOR IDENTIFYING AIRCRAFT WITH BALLISTIC PARACHUTES

- ✓ Currently ballistic parachutes will probably only be found on **"single engine"** piston powered airplanes, and some glider/sailplanes
- ✓ They may be retrofitted on Cessna 150, 152 and 172 models
- ✓ They are found as standard equipment on the Cirrus SR-20 & SR-22 aircraft
- ✓ They may be found on numerous **"EXPERIMENTAL"** or amateur built aircraft
- ✓ They are often found on ultralight/hang gliders

Cirrus SR-22



Cessna 150

Typical Ultralight

WHAT DO WE DO IF WE HAVE A BALLISTIC PARACHUTE EQUIPPED AIRCRAFT INVOLVED IN AN ACCIDENT/INCIDENT?

First, attempt to locate the parachute container /launch tube and note what direction it is pointed. Keep personnel out of its path.

During extraction use caution when moving any parts of the wreckage. After an accident, putting stress on the activating housing could cause the rocket to fire.

It would be best to have the rocket disarmed by a bomb squad/explosive ordnance disposal team.

BRS Inc. provides technical support for their products at

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South St. Paul, MN 55075
Phone (651) 457-7491
FAX (651) 457-8651
http://brsparachutes.com/

For additional copies of this brochure or questions about FAA accident investigation procedures, contact:

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(207)-780-3263
Or on the Web at:
http://www.faa.gov/region/ane/flightstandards/safety.cfm

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SAFETY ALERT

For

Aircraft Accident *First Responders*

Fire
Police
EMS
Rescue
Personnel

Prepared By
Department of Transportation
Federal Aviation Administration
New England Region
Flight Standards Division

Recent emerging technologies have allowed the development of many new safety devices for **civilian general aviation aircraft**. One new safety device found on these aircraft are **Rocket-Deployed Parachutes** also known as **Ballistic Parachutes**.

Designed to be used by the pilot in the event of an emergency, this device deploys a parachute large enough to bring down the entire aircraft and its occupants safely.

SAFETY ALERT

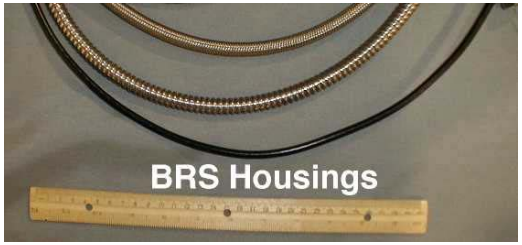
If for any reason the pilot does not or is not able to deploy these devices, rescue personnel could be faced with **an armed rocket powered device** in an aircraft involved in an accident or incident.

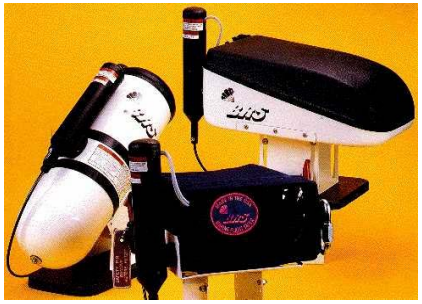
Additionally, depending on the severity of the accident, parts of the aircraft may not be in their original condition or orientation. Consequently, movement of any wreckage during rescue operations could conceivably activate the rocket.

These one and a half inch in diameter 10 inch long rockets will burn for only one second, but accelerate to over 100 mph in the first tenth of a second after ignition. The potential for injury from these efficient little rockets is significant.

HOW THE SYSTEM WORKS

A red firing handle should be located close to the pilot (normally left front seat). It is connected to an activating housing, an armored yet flexible shaft (similar to a large bicycle brake cable) that links the firing handle to the parachute container/launch tube (rocket motor) itself. The parachute container and rocket motor are usually mounted together, often on top of the aircraft. However, there are a number of mounting options, including the lower side of the fuselage where the parachute container/rocket motor may not be visible from the outside.





Parachute Containers/Launch Tubes

WHAT AIRCRAFT HAVE THESE DEVICES?

Originally developed for Ultra-light/Hang Gliding aircraft, a number of companies have marketed these devices for them.

Subsequently, BRS Inc. (ST. Paul, MN) has produced a retrofit system for a number of Cessna single engine aircraft. Additionally, in 1998 the Cirrus SR-20 and SR-22 (both are four place single engine aircraft) were certified by the FAA and required to have the BRS system installed as part of its certification.

HOW DO WE KNOW IF AN AIRCRAFT HAS A BALLISTIC PARACHUTE?

The best source of information should be the pilot. If the pilot is not available, then rescue personnel may have to rely on their own observations to determine if the aircraft is equipped with one of these devices.

Certainly, the presence of any of the system components pictured will be evidence of an installed system.

> However, most aircraft have controls or handles that are red in color. They include carburetor fuel/air mixture controls, fuel tank selectors, emergency landing gear handles to name a few. Any red handle should be examined for labels or placards.
>
> Additionally, there are a number of cables that connect to various flight controls in the aircraft. They may have a similar appearance to the activating housings pictured. These cables may become visible depending on the amount of damage sustained during the accident sequence.

Finally, there may be placards or labels on the aircraft indicating the installation of a ballistic system and any access points for that system. Since BRS Inc. is a very popular system, their logo may also be seen.