# RCA Safety and Events Committee
# Safety Bulletin

## Summary

Club managers, coaches, and athletes should pay close attention to the materials used to restrain the heels of shoes worn by rowers in rowing shells to ensure that they limit heel lift to a maximum of 7 cm. If zip ties are being used, they must be made of a material that will not stretch or break easily. Coaches and club managers providing or allowing zip ties should record the type of restraints used and be able to demonstrate their suitability.

## Discussion

The RCA Rules of Racing require that rowers be able to get clear of their boat in an emergency:

### 3.5 Quick Release Foot Stretchers

In all boats, the foot stretchers, shoes, or other devices holding the feet of the rowers shall be a type which allows the rowers to get clear of the boat with no delay in an emergency.

3.5.1 Where shoes or other devices holding the feet are fixed and will remain in the boat, each shoe or device shall be independently restrained to limit heel lift to a maximum of 7 cm for each shoe or type of foot gear fitted to the boat. In addition, where velcro or similar materials must be unfastened before the rower can remove their feet from the shoes or other device, all fastenings must be able to be released immediately by the rower with a single quick hand action of pulling on one easily accessible strap.

There is no provision in the Rules of Racing for how heels are to be restrained. Technology has evolved over the years, giving athletes a range of options for their footwear and the materials to use to restrain heel lift to allow quick escape. Considerations for restraining heels where the shoes are designed to remain in the boat include:

- Restraints must limit the lift of each shoe to 7 cm maximum
- Restraints must not stretch



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- Restraints must not be able to be disconnected while the athlete is in the shoes
- Restraints must not break when normal force is applied to get out of the shoes

Increasingly, rowers are using zip ties, also known as cable ties or zap straps, to restrain the heels of their shoes. They are an inexpensive option that are easily obtained and replaced for different users of the same shoes in a boat.

**However, not all zip ties are appropriate for the safety of athletes in rowing shells.**




***IF* zip ties are going to be used to restrain heel lift**, they should be made of nylon and should not be reusable or releasable.

If a zip tie is not right for the purpose, it should be removed and replaced.

Zip ties will deteriorate over time with use and due to UV radiation, water, and atmospheric contaminants. They must be checked and replaced regularly.

When an athlete is sitting in the boat and must get out, they will apply force to lift their foot out of the shoe. The zip tie must withstand that force without breaking so that the foot can slide out of the shoe and the rower can escape.

**Zip ties must have a minimum tensile strength of between 50 and 120 pounds.**

Manufacturers will test their product to determine how much weight is required to break their ties. ***If a zip tie is not rated, it should not be purchased for use in rowing shells.***

Club managers and coaches should select the appropriate quality of any zip ties that they use for heel restraints, and should ensure that they are able to demonstrate the source and reliability of ties that they are applying to their boats. In the event of an incident requiring investigation, it will be essential that clubs and coaches demonstrate care and diligence in the acquisition and application of suitable devices to ensure the safety of their athletes.

The RCA Safety and Events Committee have conferred with World Rowing and US Rowing on this subject and will continue to monitor the development of technology and policies covering the use and application of zip ties as restraint devices for rowing shoes.



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