

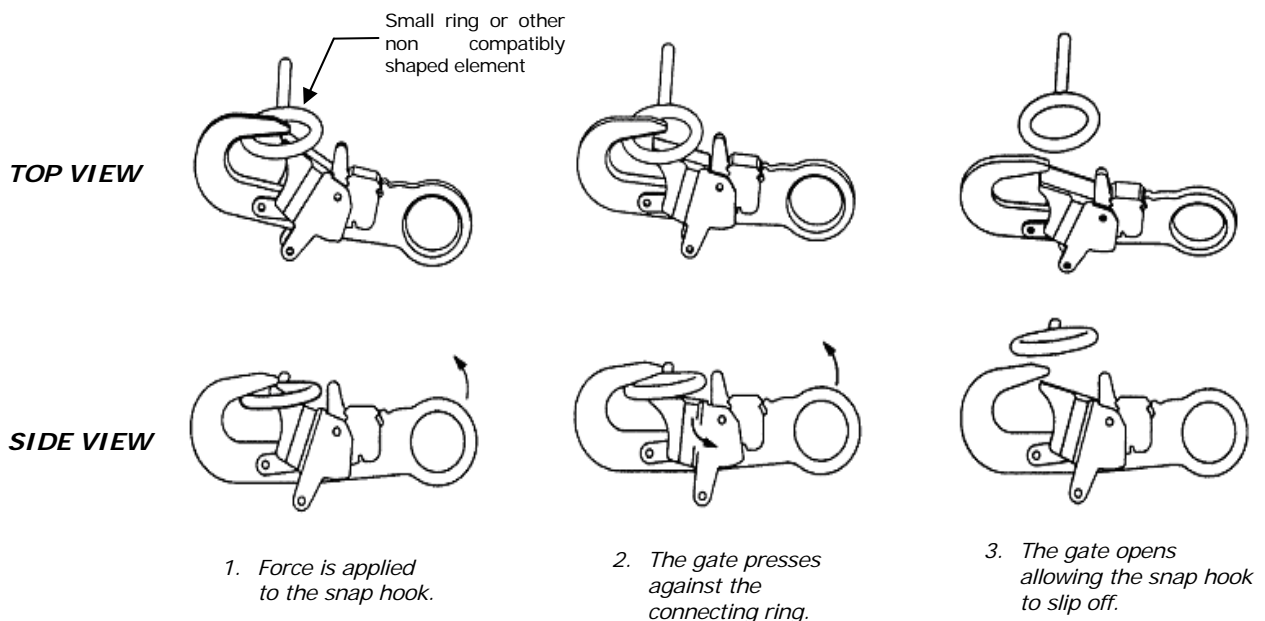
Technical Bulletin

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Subject: Compatibility of Attachment Hardware

Compatibility refers to the harmonious operation between individual elements, as well as component subsystems. Typically, the size and configuration of snap hooks, karabiners, D-rings and anchorage connectors are considered when addressing compatibility issues. Connectors are compatible when they are designed to work together so their sizes and shapes do not cause the gate mechanisms to inadvertently open (roll-out) regardless of orientation. Non-compatible hardware must not be used.

If the connecting element that a snap hook or karabiner attaches to is undersized or irregular shape, the connecting element can apply a force to the snap hook gate or karabiner. This pressure may cause the gate to open, allowing the snap hook or karabiner to disengage from the connecting point.



Capital Safety recommends equipment from one fall protection equipment manufacturer be used as a system to help ensure compatibility. Capital Safety equipment is designed for use with Capital Safety approved components and subsystems only. Substitutions or replacements made with non-approved components may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system. Fall protection systems assembled from components made by different manufacturers should only contain components that meet the requirements of applicable fall protection standards.



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Specific guidelines to follow when addressing compatibility issues include:

1. Read and understand all user instructions for the equipment involved.
2. The respective manufacturers shall be consulted and, if necessary, perform the testing required by *AS/NZS 1891 – Industrial fall-arrest systems and devices*.
3. Non-compatible connectors may unintentionally disengage. Snap hooks and karabiners shall be compatibly matched to their associated connector to reduce the possibility of roll-out. Connectors must be compatible in size, shape and strength.
4. Snap hooks and karabiners shall be securely closed and locked once coupled to a connector.
5. The stability and compatibility of couplings between anchorage connectors and anchorage points shall be considered when selecting anchorage points and anchorage connectors. Connectors must be compatible with the anchorage or other system components.
6. Capital Safety connectors (snap hooks and karabiners) are designed to be used only as specified in each product's user instructions. Use connectors that are suitable to each application.
7. Connectors shall be suitably sized and configured to interface compatibly with other connectors they will be attached to.
8. Type 1 fall arrestors (rope grabs) shall be analysed for compatibility with the lifeline it operates on.
9. Other factors to consider when looking at compatibility issues include impact forces, swing fall hazards, total fall distances, and free fall distances.

Capital Safety snap hooks and karabiners should not be connected in any of the following circumstances:

- A. To a D-ring to which another connector is attached
- B. In a manner that would result in a load on the gate.
- C. In a false engagement, where features protruding from the snap hook or karabiner can catch on the anchor and without visual confirmation seems to be fully engaged to the anchor point.
- D. Directly to a similar connector (e.g. snap hook to snap hook)
- E. Directly to webbing, rope lanyard or tie-back, unless the manufacturer's instructions for both the lanyard and connector specifically allow such a connection.
- F. To any object which is shaped or dimensioned such that the snap hook or karabiner will not close and lock or where roll-out can occur.

NOTE: Large throat opening snap hooks should not be connected to standard size D-rings or similar objects which can result in a load on the gate if the hook or D-ring twists or rotates. Large throat snap hooks are designed for use on fixed structural elements such as cross members that are not shaped in a way that can capture the gate of the hook.

