

Technical Bulletin

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Subject: Buckle Specifications and Operation

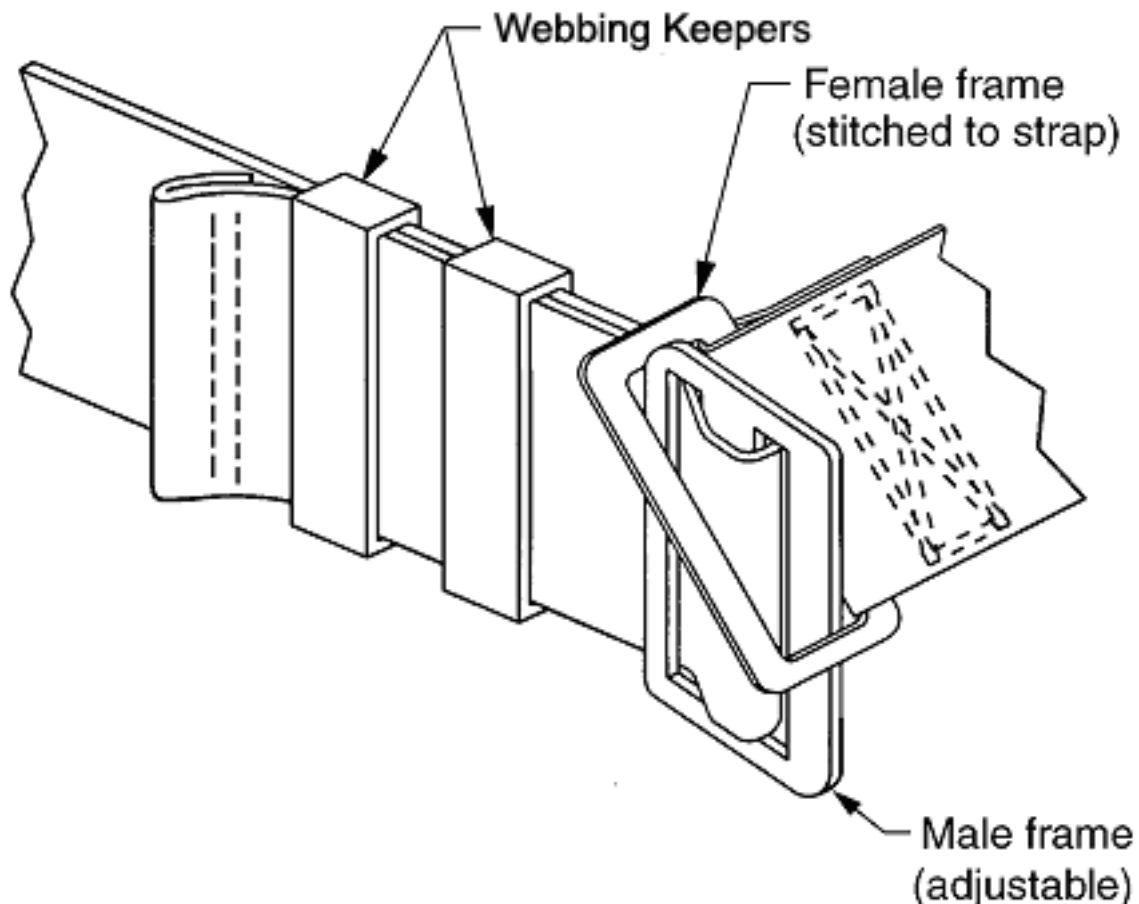
Capital Safety Australia uses two types of buckles in fall arrest harnesses manufactured from alloy Steel, Aluminum and Stainless Steel, These buckles are used in a variety of body belts and fall protection equipment; these are pass through (2bar & 3Bar) and quick connect buckles.

The Buckles are designed to provide the user with a means to tighten and adjust the webbing straps to a snug fit as described in its accompanying user's instructions ensuring a firm fit and proper fit and performance.

Product instructions in the User Instruction Manual provide additional information and practices for buckle use and include procedures on inspection, donning, use, care, and maintenance.

Correct operation, materials, strength, corrosion resistance and standards for both types are given below.

Pass Through Buckle Specifications





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Buckle Operation:

The pass through buckle is composed of two mating flat metal components. The female buckle is an open rectangle that is permanently attached to a sewn loop at the end of a strap. The 3 bar male buckle is attached to the joining strap by passing the webbing through two slots. To engage the buckle, turn the male buckle at an angle so that it will pass through the female buckle. After it has passed through, turn it back so that the male buckle lies directly on top providing a tortuous path for the adjustable webbing to pass through.

Note; The web keepers may also be manufactured from elastic or plastic.

Buckle Adjustment: To adjust the tension on the straps to be joined by a pass through buckle simply pull the free end of the webbing through the buckle assembly to suit.

When adjusting the excess webbing through the 3 bar buckle keep the webbing flat and do not cut off the excess webbing.

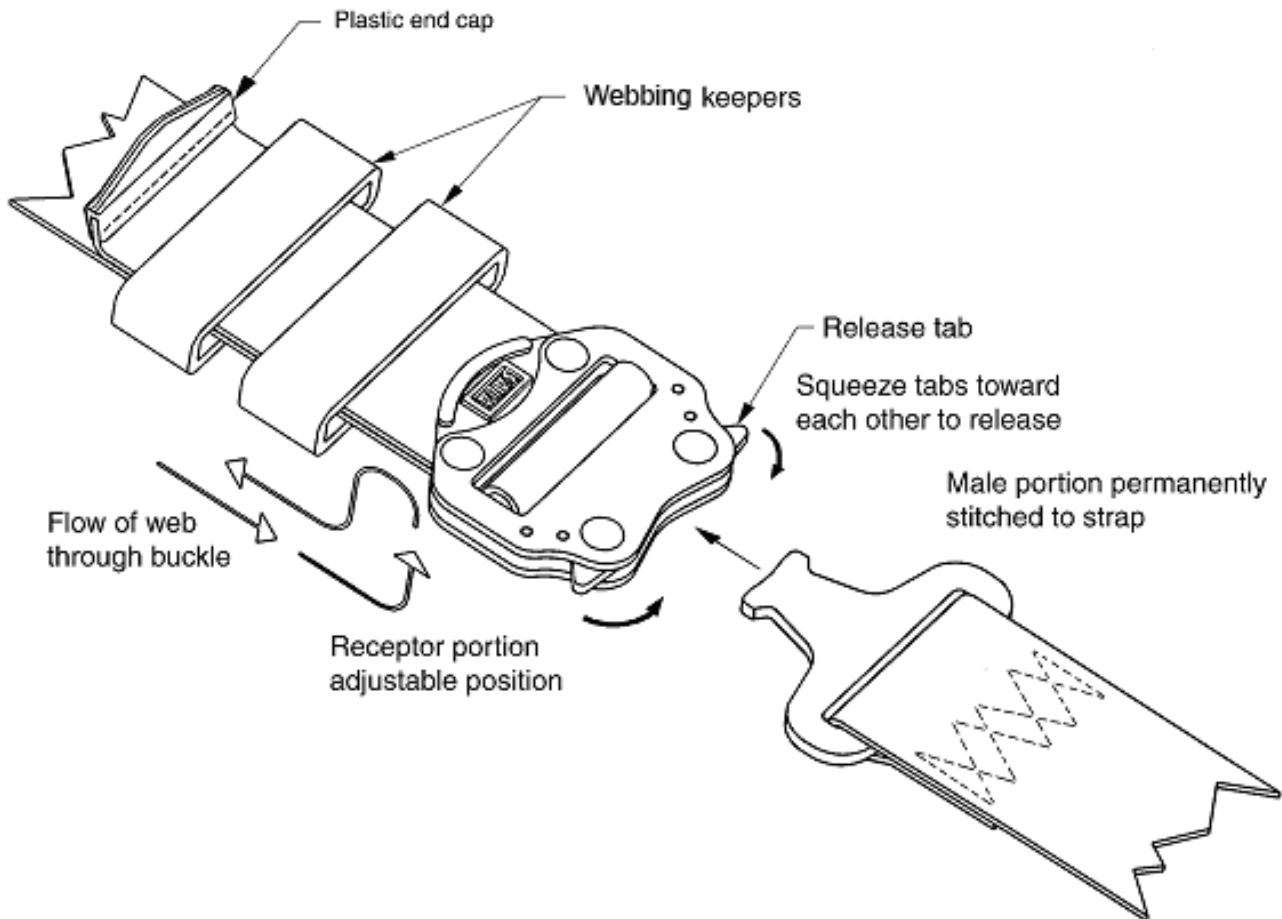
Buckle Release: To disengage a pass through buckle, force the 3 bar buckle up at an angle to the female buckle allowing the adjustable webbing to release sliding through the buckles until there is enough slack in the strap to allow the male buckle to be turned on an angle where it can be removed if required..

Material: Forged alloy steel
Forged stainless steel
Pressed stainless steel

Corrosion Resistance: Buckles, other than those constructed from stainless steel, are coated for corrosion protection in accordance with the coating grades of the AS/NZS 1891.3 standard.

Strength: Capital Safety pass through buckles are designed to withstand a minimum of 5kN without permanent distortion and meet the AS/NZS 1891.1 standard. They are also capable of withstanding a tensile load of 17.8kN without breaking.

Quick Connect Buckle Specifications



Buckle Operation:

The quick connect buckle consists of two parts: the male part and the receptor buckle. The male portion is a metal tongue with flanges on the end which is sewn to the end of a strap. The joining strap is woven through the receptor half of the buckle and ended with a sewn plastic end cap to prevent the webbing from slipping through the receptor buckle. The webbing may be pulled through the receptor buckle to position the buckle when adjusting the webbing to fit the assembly to the user. To connect the buckle, insert the male portion into the receptor half of the buckle until a distinct click is heard. The noise is created by spring loaded latches that capture the flanges on the tongue. A sharp tug on the strap will reveal whether the connection is complete.

Joining Strap receptor buckle lock

Buckles used in the SALA range of product have turn buckle fitted the receptor buckle that when rotated will lock the joining webbing after the operator sets the position of the strap which negates the slippage that may occur over time in use.



Buckle Adjustment: To increase tension on the strap, while the buckle is engaged, pull the free end of the webbing strap through the receptor buckle to tighten the strap assembly. To decrease strap tension, pull the plastic tab on the receptor up away from your body and allow the strap to slide back through the buckle. When the desired tension is achieved, tuck the free end of the webbing into the web keeper or ensure that the webbing is pulled through the keeper which should keep the webbing strap flat keeping it from interfering with other equipment. Do not cut excess webbing off the strap.

Buckle Release: To release the buckle, simultaneously squeeze the spring loaded metal latches toward each other with one hand and pull the male portion out of the receptor with the other hand. Drop tests have confirmed that depressing only one of the latches will not release the buckle. In normal use, accidentally depressing one latch will not unlock the buckle.

Material:

Buckles are made of a combination of materials,
Release tabs and tongue: cold rolled, heat treated alloy steel. Aluminum and plastic, Knurled round bar: cold drawn steel
Spring: Diameter, 0.45mm, hard drawn, stainless steel spring wire
Yellow plastic tab: nylon

Corrosion Resistance: Buckles, other than those constructed from stainless steel, are coated for corrosion protection in accordance with the coating grades of the AS/NZS 1891.3 standard.

Strength: Capital Safety quick connect buckles are designed to withstand a minimum of 5kN without permanent distortion and meet the AS/NZS 1891.1 standard. They are also capable of withstanding a tensile load of 17.8kN without breaking.

User Manual

Users Fall Arrest harnesses should refer to the to the Product user manual for further information.