Diagram 6: Y Piece Assembly - Attachment to Winch Hook

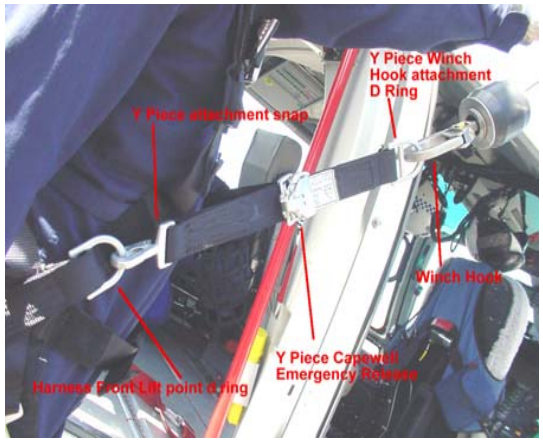


Diagram 7: HW-YP [ ] winch hook attachment D Ring (2087)

Safety Equipment Technical Services Pty Ltd
CASA Approved Aircraft Restraint Harness and Y Piece

Safety Equipment Technical Services Pty. Ltd.

Restraint Harness
&
Y Piece Assembly

Installation Instructions and Limitations

Applicable Part Numbers

HW-CRW [ ]
HW-YP [ ]

Australian Technical Standard Order
(ATSO)

Number: …C1003...

This supplement approves the use of SETS Restraint Harness, (Pt No. HW-CRW [ ]) and SETS Y Piece Assembly, (Pt No. HW-YP [a], HW-YP [b] and HW-YP [c]), under certain conditions.

The information contained within this Installation Instructions and Limitations Manual contains information which supplements that of the Approved Flight Manual. For data not contained in this manual, refer to the basic Approved Flight manual. When in use, the data in this supplement has precedence over the equivalent data in the basic Approved Flight Manual.

If SETS Restraint Harness is used in conjunction with other equipment, such as restraint strap, reference should be made to the User and Instructions manuals for that equipment for information concerning technical data, instructions for use and operational limitations.

The ATSO prescribes the minimum performance standards which must be met by a Helicopter External Lifting Device in order to be identified with the ATSO-C1003 marking. It is the responsibility of those wishing to install the SETS Restraint Harness on or within an aircraft to determine that the aircraft's installation conditions are within the ATSO-C1003 standards. The SETS Restraint Harness and/or Restraint Harness and Y Piece may only be installed if further evaluation, by the user/installer, substantiates an acceptable installation and is approved by the Civil Aviation Safety Authority.

Diagram 4: Restraint Harness - Attachment to Restraint Strap

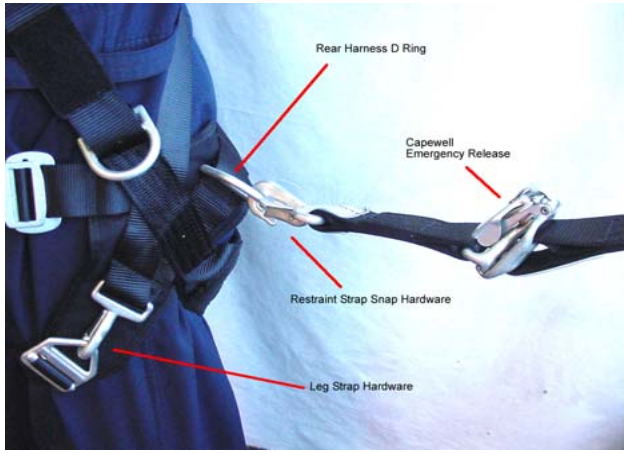


Diagram 5: Restraint Harness - Attachment to Y Piece Assembly

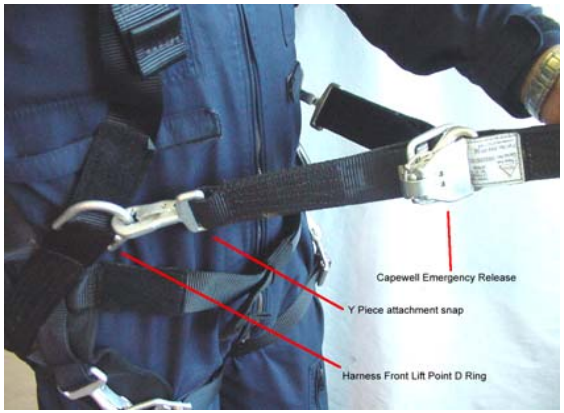


Diagram 2: HW-YP [a]

NB: HW-YP [c] is constructed with extended length Part A

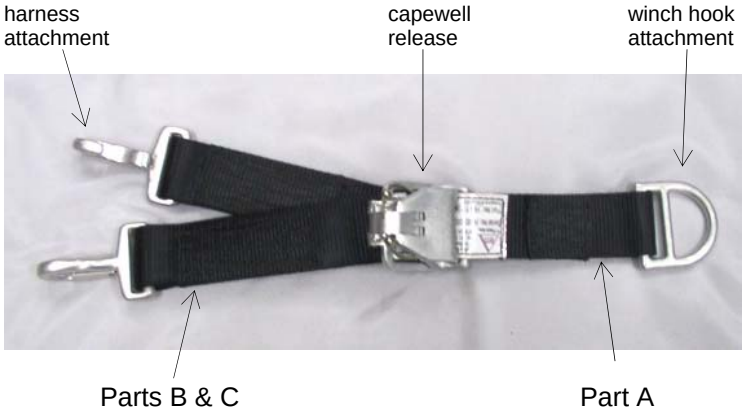
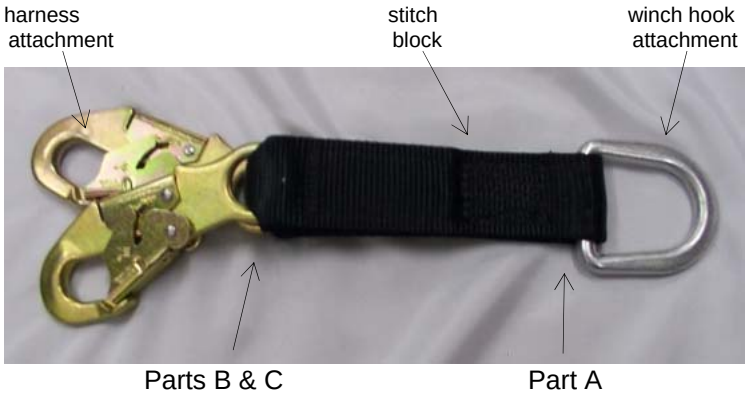


Diagram 3: HW-YP [b]



Log of Effective Pages:

Page	Date	Page	Date
1	06-2006	9	06-2005
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4	06-2006	12	06-2006
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Section 1 General

The SETS Restraint Harness is intended to be used to restrict the movement of the user within the aircraft cabin when used in conjunction with an approved restraint strap which is attached to an approved primary load bearing attachment point.

The SETS Restraint Harness is intended to also be used as a helicopter external lifting device and is attached to the helicopter winch hook with SETS Y Piece Assembly only.

Section 2 Limitations

Note: The Restraint Harness is not a seat belt for the purposes of CAR 251.

The following limitations shall be observed:

1. For all winching operations where SETS Restraint Harness is used as a helicopter external lifting device and is attached to the helicopter winch hook, SETS Y Piece must be used as the interconnecting part to the winch hook.
2. The user of the Restraint Harness and Y Piece shall be familiar with the operation of each assembly and the emergency procedures of this supplement.
3. If any part of a flight includes winching operations, SETS Y Piece Part No. HW-YP [a], HW-YP [b] or HW-YP [c] should be used between the frontal lift point 'D' rings to the winch hook.

Quick Release Hardware

The quick release hardware is the capewell release. It is a two piece mechanism incorporating an internal (male) fitting which is inserted into an external (female) body. To activate the capewell release, the occupant must pull back the top cover which allows the inner wire ring release handle to become exposed. The occupant then pulls the wire release ring to separate the male & female parts.

NB: There is no quick release hardware installed on HW-YP [b].

Diagram 1: Capewell Release

The Y Piece Assembly is described below:

The Y Piece Assembly is a three legged 'winch release assembly'.

Sub-Part A

The upper leg:

HW-YP [a] and HW-YP [c]

This comprises of the inner (male) part of the capewell release joined by a webbing section to the upper winch hook attachment.

HW-YP [b]

This comprises of the upper winch hook attachment to the central stitch block.

Sub-Part B & C

The lower legs:

HW-YP [a] and HW-YP [c]

This comprises of a lower, harness lift point connecting snap joined to the outer (female) part of the capewell release by a webbing section.

There are two 'lower legs' which are identical parts (ie: Sub-Parts B & C). The snaps face each other in the assembly.

HW-YP [b]

This comprises of a lower, harness lift point connecting snap to the central stitch block.

There are two 'lower legs' which are identical. The 'self locking' snaps face the same direction in the assembly.

4. The aircraft shall be manoeuvred in such a way that the wearer is not subjected to additional risk while using the restraint harness.
5. The pilot shall ensure that the movement of the wearer about the aircraft will not result in the aircraft's centre of gravity limits being exceeded.
6. An approved seat and seat restraint must be available at all times to the wearer of the restraint harness for take off, landing and emergency conditions.
7. The restraint harness must be secured to an approved restraint strap, which must be secured to an approved hard point within the aircraft cabin. The hard point must be rated for a human or cargo load of not less than 110 kg (242 lb).
8. No component of the restraint harness or Y piece may be used at any time ten (10) years after the date of manufacture marked on each assembly.

Section 3 Emergency Procedures

In the event of an emergency, or at the direction of the pilot, the user should:

1. Release the harness from the restraint strap by either the snap hook or by activating the emergency release mechanism built into the strap.
2. Return to the original seat.
3. Put on seat restraint.

4. Release the Y Piece Assembly from the winch hook by either the winch hook or by activating the emergency release mechanism built into the HW-YP [a] and HW-YP [c] assembly.

NB: Y Piece Part Number HW-YP [b] has no emergency release mechanism built into the assembly. Release from the winch hook when using the HW-YP [b] assembly is by means of the winch hook or internal aircraft winch cable release mechanism.

5. Return to the original seat.
6. Put on seat restraint.

Section 4 Normal Procedures

Pre-Flight

The following inspections and procedures should be carried out prior to flight:

1. Inspect the snaps to ensure that they function correctly and that they are not damaged or locked.
2. Inspect the adjusters to ensure they are installed correctly and that they are not damaged or locked in any way.
3. Inspect the D rings and belly band hardware to ensure they are not damaged.
4. Inspect all webbing to ensure there is no damage and that the webbing is routed through the adjusters correctly without twists.

Sub-Part C

This part comprises the right side chest strap.

Sub-Part D

This comprises the left and right side main front adjustment straps and through the lumbar block to form the rear side of the seat.

Sub-Part E

This comprises the left and right main lift web and D rings through the left and right lumbar block and the front side of the seat.

Sub-Part F

This comprises the left and right leg straps.

Belly Band

This comprises left side non-adjusting belly band and right side adjustable belly band.

Section 5 Performance

This equipment has no bearing on aircraft performance.

Section 6 Weight and Balance

The pilot should consider the weight and balance of the restraint harness and Y Piece as part of the weight of the wearer.

The pilot shall ensure that the movement of the wearer about the aircraft will not result in the aircraft's centre of gravity limits being exceeded.

Section 7 Systems Description

When correctly fitted, the restraint harness and Y Piece enables personnel to carry out their duties in a comfortable, safe environment.

The harness is described below:

The Restraint Harness is a full body harness.

Sub-Part A

This part comprises the front chest positioned adjuster hardware, over the padded shoulder and back straps and through the lumbar block to form the diagonal back straps and lumbar support strap.

Sub-Part B

This part comprises the left side chest strap.

5. Inspect all stitching to ensure it is all intact and undamaged.
6. Inspect the Y Piece and restraint strap harness attachment hardware to ensure it is compatible with the harness attachment D rings by coupling and uncoupling the attachment hardware and D rings.
7. Inspect the upper Y Piece D ring attachment hardware and the winch hook to ensure it is compatible with the harness attachment D rings by coupling and uncoupling the attachment hardware and winch hook.

Operation

Where possible, the restraint harness should be attached to the restraint strap whilst positioned in an aircraft seat. This ensures that the user spends the minimum time possible unsecured.

Where possible the Y Piece assembly, which is attached to the restraint harness front two winch attachment D rings, should be attached to the winch hook prior to disconnecting from the restraint strap.

To fit the restraint harness correctly:

1. Place the harness shoulder straps over each shoulder.
2. Place the harness 'seat' under buttocks.
3. Pass one leg strap around each leg, ensuring the left strap goes around the left leg and the right strap around the right leg and that there are no twists in the strap.

HW-CRW [-1]: Attach the 'V' ring adjuster on the leg strap to the hip mounted snap hooks. Adjust the leg straps so they are a firm fit without any discomfort and position the elastic keepers at the loose end of the strap at the turn-back.

HW-CRW [-2]: Insert the leg straps through the hip mounted adjuster hardware, or if already inserted, step into the leg straps. Adjust the leg straps by pulling the loose leg strap through the hip mounted adjusters. Adjust the leg straps so they are a firm fit without any discomfort and position the elastic keepers at the loose end of the strap at the turn-back.

HW-CRW [-3]: Insert the male adapter on the leg strap through the hip mounted female adapter. Adjust the leg straps so they are a firm fit without any discomfort and position the elastic keepers at the loose end of the strap at the turn-back.

4. Position the rear lumbar strap to a comfortable position across the lumbar region of the back.

5. Adjust the shoulder straps to a comfortable fit and position the elastic keepers at the loose end of the strap at the turn-back.

6. Attach the chest strap:

   HW-CRW [-1]: Attach the 'V' ring adjuster to the snap and adjust to a comfortable fit and position the elastic keeper at the loose end of the strap at the turn-back.

   HW-CRW [-2]: Insert the chest strap through the adjuster and adjust to a comfortable fit and position the elastic keeper at the loose end of the strap at the turn-back.

   HW-CRW [-3]: Insert the male adapter through the female adapter and adjust to a comfortable fit and position the elastic keeper at the loose end of the strap at the turn-back.

7. Pass the right side belly band hardware through the left side hardware and adjust to a comfortable fit. Secure the loose end of the strap to the Velcro and position the elastic keeper at the turn-back.

4. <u>Fitting of Y Piece</u>

a) Attach the lower snaps to each of the winch harness lift point D rings.

b) Attach the upper D ring over the winch hook.

c) Close the winch hook gate and install the safety pin.