



Safety Equipment Technical Services Pty Ltd
ABN: 36 083 308 427

MANUFACTURER INSTRUCTION & MAINTENANCE MANUAL (MIMM 200005)

Y Piece Assembly



Issue 1

January 2025

Safety Equipment Technical Services Pty Ltd (SETS) is the owner of the copyright of this document & no part is to be copied, reproduce or passed on to any person or organisation without the express written permission of Safety Equipment Technical Services Pty Ltd. This document was originated in Australia & is covered under existing laws, regulations & agreements for the possession & release of any data contained herein or associated with this document & any associated approvals.

Safety Equipment Technical Services Pty Ltd
60 Emerald Creek Rd. Monbulk
Vic. Australia. 3793

GENERAL

This MIMM replaces all previous SETS Y Piece Assembly Operating Instructions & Limitations and SETS Y Piece Assembly Installation Instructions and Limitations documents.

This manual is provided for use with the SETS Y Piece Assembly (HW-YP) and provides manufacturer and maintenance instructions to the user/operator when utilising and caring for this equipment.

SETS Y Piece Assembly is approved to the Australian Technical Standard Order ATSO-C1003 which prescribe the minimum performance standards which must be met by this equipment. It is the responsibility of the user/operator to ensure that the installation of the SETS Y Piece Assembly on or within an aircraft to determine that the aircraft's installation conditions are within the approval requirements. The SETS Y Piece Assembly may only be installed if further evaluation, by the user/operator, substantiates an acceptable installation and is approved by the local Civil Aviation Safety Authority or other approved local representative.

If the SETS Y Piece Assembly is used in conjunction with other non-SETS equipment, then it is the responsibility of the user/operator to ensure reference is made to the other manufacturer user/instructions. It should describe the equipment for information concerning technical data, instructions for use and operating limitations.

APPLICABLE MODELS

All SETS HW-YP [-]

Y Piece Assembly

HW-YP [a] series

HW-YP [b] series

HW-YP [b-L] series

HW-YP [c] series

AMENDMENT RECORD

1. All amendments to content are to be recorded below;
2. All new content inserted during an amendment will be shown with a vertical line in the margin indicating the extent of the amended portion.

Amendment		Summary	Incorporated	
No.	Date	Sections/Pages Affected	Date	Name
1	01-2025	Document Rewrite and Release	1/01/2025	J. Berman
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

CONTENTS

APPLICABLE MODELS.....	2
AMENDMENT RECORD	3
CONTENTS	4
1. Limitations of Use.....	5
2. Design & Construction.....	6
3. Use of Y Piece Assembly	11
4. Storage	14
5. Maintenance - General	15
6. Inspection	16
7. Service Life	17
8. Cleaning.....	18
9. Overhaul and Repair	19

1. Limitations of Use

The SETS Y Piece Assembly (HW-YP) is not designed for use on its own. It is designed for use in conjunction with a SETS Restraint/Rescue Harness which is approved to ATSO-C1003, to enable the user to attach to the aircraft's winch hook for use during 'down the wire' operations.

SETS Restraint/Rescue Harness manual is separate to this manual.

The SETS Y Piece Assembly should only be used by personnel who have been trained in the correct fitting, assembly, disassembly and emergency release of the associated assembly. The user/operator must be familiar with the equipment limitations and guidelines as set out in this manual and in any additional Approved Installation which the operator may gain.

NOTE

SETS Y Piece Assembly is not a 'seat belt'. It is provided for use to attach to the aircrafts winch hook when not in a seat and seat belt/harness.

SETS Restraint/Rescue Harness requires additional approval prior to installation onto the aircraft. Refer to that approval for any additional requirements.

The Safe Working Load of the SETS Y Piece Assembly is for use by one single human load with a total weight including equipment of 200kg/440lb

CAUTION

Any modifications, additions or alterations to any part of the SETS Y Piece Assembly must be approved prior to use.

If any part of the webbing, hardware or stitching becomes exposed to corrosive or hazardous chemicals, the SETS Y Piece Assembly should be removed from service.

Any repairs must be completed & certified by SETS prior to placing the Y Piece Assembly back into service.

If any part of the assembly is worn or damaged, consult this manual or SETS directly to establish the serviceability of the assembly prior to next use.

2. Design & Construction

2.1 SETS Y Piece Assembly Part Number:

- HW-YP [-]

2.2 The Y Piece is a non-adjustable three-legged assembly constructed with:

- Heavy duty safety polyester webbing
- A D ring or Carabiner for winch hook attachment depending on variant
- Self-locking snaps for harness attachment depending on variant
- Available with or without an emergency quick release (Capewell) mechanism incorporated into its design depending on variant



Picture 1

Various Y Piece Assemblies

2.3 SETS Y Piece Part Number Variations

HW-YP [a] series variants are all three-legged, non-adjustable assemblies **WITH** a quick release mechanism (Capewell) incorporated.

HW-YP [a]



- D Ring for winch hook attachment,
- Capewell for emergency release,
- Standard snaps for harness attachment.

HW-YP [a-1]



- D Ring for winch hook attachment,
- Capewell for emergency release,
- Self-locking snaps for harness attachment.

HW-YP [a-2]



- Carabiner for winch hook attachment,
- Capewell for emergency release,
- Standard snaps for harness attachment.

HW-YP [a-3]

- Carabiner for winch hook attachment,
- Capewell for emergency release,
- Self-locking snaps for harness attachment



HW-YP [b] series variants are all three-legged, non-adjustable assemblies **WITHOUT** a quick release mechanism (Capewell) incorporated.

HW-YP [b]



- D Ring for winch hook attachment,
- Self-locking snaps for harness attachment.

HW-YP [b-1]

- D Ring for winch hook attachment,
- Standard snaps for harness attachment.



HW-YP [b-2]



- Carabiner for winch hook attachment,
- Standard snaps for harness attachment.

HW-YP [b-3]



- Carabiner for winch hook attachment,
- Self-locking snaps for harness attachment.

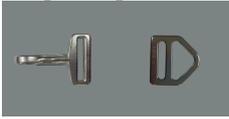
HW-YP [b-L] series variants are all three-legged, non-adjustable assemblies **WITHOUT** a quick release mechanism (Capewell) incorporated but with an extended length upper leg. The Y Piece has the same hardware options as the HW-YP [b]

HW-YP [b-L]



- D Ring for winch hook attachment,
- Self-locking snaps for harness attachment.

HW-YP [b-1L]



- D Ring for winch hook attachment,
- Standard snaps for harness attachment.

HW-YP [b-2L]



- Carabiner for winch hook attachment,
- Standard snaps for harness attachment.

HW-YP [b-3L]



- Carabiner for winch hook attachment,
- Self-locking snaps for harness attachment.

HW-YP [c] series variants are all three-legged, non-adjustable assemblies **WITH** a quick release mechanism (Capewell) incorporated but with an extended length upper leg. The Y Piece has the same hardware options as the HW-YP [b]

HW-YP [c]



- D Ring for winch hook attachment,
- Capewell for emergency release,
- Standard snaps for harness attachment.

HW-YP [c-1]



- D Ring for winch hook attachment,
- Capewell for emergency release,
- Self-locking snaps for harness attachment.

HW-YP [c-2]



- Carabiner for winch hook attachment,
- Capewell for emergency release,
- Standard snaps for harness attachment.

HW-YP [c-3]



- Carabiner for winch hook attachment,
- Capewell for emergency release,
- Self-locking snaps for harness attachment

3. Use of Y Piece Assembly

- 3.1 The user should first don the SETS Restraint/Rescue Harness
- 3.2 Visually and physically confirm that the Capewell emergency release is correctly assembled (if incorporated depending on variant). This does not require disassembly of the Capewell.
- 3.3 Attach the lower self-locking snaps (depending on variant) to the two restraint/rescue harness frontal lift point D rings.
- 3.4 Attach the upper connector hardware (D Ring or Carabiner) to the winch hook.

CAUTION

The user must ensure that webbing or padding material is not inadvertently caught in any of the Y Piece hardware connectors, snap hooks or rings when attaching the Y Piece to the Harness. Doing so may lead to the hardware not engaging and/or locking correctly

CAUTION

The user/operator should consider the orientation of the Capewell (left or right in relation to the user) to minimise any possible hardware contact and/or accidental activation of the Capewell assembly

Operation of the Capewell Release Assembly

Activation/Disassembly

- Pull back the top cover which exposes the wire release handle. Pictures 1 and 2



Picture 1



Picture 2

- Pull on the wire release handle - Picture 3
- Capewell mechanism will separate - Picture 4



Picture 3



Picture 4

Assembly

- Lay the main body of the Capewell release on a flat surface and fold the latching mechanism back away from the main body - Picture 1
- Lay the rear bar of the triangular shaped piece into the slot at the front of the main body - Picture 2
- Push the triangular piece downward until flat - Picture 3
- Push the latching mechanism downward into place - Picture 4



Picture 1



Picture 2



Picture 3



Picture 4

- With the latching mechanism locked into place position the wire release handle under the cover lock groove at the rear of the main body - Picture 5
- Push the leading edge of the cover into the groove on the main body above the wire release handle - Picture 6



Picture 5



Picture 6

- Push the cover over the mechanism and snap into position to complete the assembly - Picture 7.



Picture 7

4. Storage

- 4.1 SETS equipment should be stored in a secure area. The storage area should be free of foreign matter, moisture, direct sunlight, extreme changes in temperature, high humidity and rodents.
- 4.2 SETS equipment should be stored away from other non-aircraft/industrial products.

CAUTION
Inappropriate storage of SETS Y Piece Assembly may lead to a deterioration of the strength of the webbing, stitching and hardware

5. Maintenance - General

5.1 The recommended maintenance schedules for the inspection of SETS equipment are as follows:

- Before & After Use Check.
- 12 monthly Inspection & Recertification by a CASA approved repairer/inspector.

NOTE

Any repairs of SETS Equipment is conducted 'on condition' due to damage or wear. This work may only be carried out by SETS.

Any repairs to SETS equipment will require a full inspection of the equipment prior to releasing.

6. Inspection

6.1 Before & After Use Check

SETS equipment should be checked by the user/operator as follows:

- Check the webbing for any signs of major damage.
- Check the hardware for any signs of damage, ease of use and free of foreign matter.
- Check for any major corrosion on metal hardware, D rings and adjusters. If in doubt, contact SETS for advice.
- Check the stitching for any damaged or loose stitching or separating of webbing.
- Ensure the harness is identifiable by SETS ID tag/s or internal asset number.

NOTE

If the Y Piece Assembly has been exposed to a shock loading event it must be removed from service

6.2 12-Monthly Inspection & Recertification:

The yearly inspection & recertification is more detailed than the Before & After Use Check completed by the user/operator. It ensures the serviceability of all parts & components and is conducted by a suitably experienced & qualified inspector. This inspector should be authorised to issue CASA Approved Authorised Release Certificates (ARC).

SETS will issue an ARC on completion of any service/repair and/or annual inspection and recertification. The equipment will remain 'Approved' for use by SETS from the date on the ARC for a period of 12 months to the end of the month in which the ARC was issued.

SETS may in exceptional circumstances (as deemed by SETS) allow an additional +1 month tolerance to the yearly inspection and recertification if certain conditions are met. The user/operator should contact SETS for approval in relation to this request if it is required.

7. Service Life

- 7.1 SETS equipment has an identification label affixed to it. This label details:
- Equipment description.
 - Model designation.
 - Date of manufacture.
 - Serial number.
 - Time expire date (TX Date).
 - Approvals applicable to the equipment.
- 7.2 ATSO Approved equipment has a life expectancy of 10 years from the date of manufacture regardless of any service, repairs or overhauls carried out on it during its in-service life.
- 7.3 SETS equipment should be withdrawn from service after the stated TX Date on the label. If there is no TX Date or this date is un-readable, then 10 years after the date of manufacture.
- 7.4 If the user/installer is unsure as to the TX Date of any of SETS equipment, they should contact SETS for confirmation and advice.

8. Cleaning

8.1 Post Saltwater Immersion/Exposure

To clean the Y Piece Assembly:

- Disassemble the Y Piece Assembly
- Thoroughly wash the assembly in clean fresh water.
- Thoroughly rinse the entire assembly in clean water, it is recommended a separate container/bucket is used – it may require several rinses.
- Air-dry the assembly naturally away from direct sunlight & away from any heating elements.
- Assemble the Y Piece Assembly
- When dry, lightly lubricate all hardware with LPS1/WD40 or similar anti corrosion lubricant. Spray the lubricant onto a rag & wipe over the hardware or carefully spray the hardware. Wipe or blow any excess off the assembly with an air compressor & complete the 'Before & After Use' Check.
- Ensure the entire assembly is dry prior to storage. If the webbing is stored wet, it may reduce the load capacity over time & it will wear the hardware plating prematurely around the hardware webbing bars & corrosion will occur.

8.2 Fresh Water Immersion/Exposure

To clean the Y Piece Assembly:

- Disassemble the Y Piece Assembly
- Thoroughly rinse the entire assembly in clean water – it may require several rinses.
- Air-dry the assembly naturally away from direct sunlight & away from any heating elements.
- Disassemble the Y Piece Assembly
- When dry, lightly lubricate all hardware with LPS1/WD40 or similar anti corrosion lubricant. Spray the lubricant onto a rag & wipe over the hardware or carefully spray the hardware. Wipe or blow any excess off the assembly with an air compressor & complete the 'Before & After Use' Check.
- Ensure the entire assembly is dry prior to storage. If the webbing is stored wet, it may reduce the load capacity over time & it will wear the hardware plating prematurely around the hardware webbing bars & corrosion will occur.

CAUTION

If using soaps & detergents in the cleaning of SETS equipment, the product should be checked to ensure there would be no detrimental effect on the webbing, stitching & hardware. If in doubt, complete the washing in clean fresh water only

If using lubricants in the care of SETS equipment, the product should be checked to ensure there will be no detrimental effect on the webbing, stitching & hardware

9. Overhaul and Repair

9.1 Overhaul and Repair of the Y Piece Assembly may only be undertaken by SETS.