SAYFA

WORKING AT HEIGHT

OPERATION & INSTRUCTION MANUAL FOR AVIATOR & PAYLOAD

AVIATOR
A permanent safety line for working at height

PAYLOAD
Secure and tested walkway, ladder, platform and handrail systems for safe building access

INTRODUCTION TO THE SAYFA SYSTEMS AVIATOR FALL RESTRAINT/ ARREST SYSTEM INSTRUCTION MANUAL

The training course given has been designed with the following learning objectives in mind so that each candidate gains knowledge of Working At Height (WAH) awareness concerning:-

- Specific training on the use of Aviator Safety Line and PPE (Personal Protection Equipment).
- Covers use of Payload, safe building access consisting of walkway, ladder, platform and handrail systems (Collective Protection Measures).

The course aims to provide useful information and relevant instruction to the candidate, assisting with the skills required and perform efficiently within their occupation.

The course describes what Working at Height is, explaining the Working at Height Regulations 2005 and how to comply with the regulations. It explains the difference between personal and collective protection measures. It also covers organisation, planning and competence measures, including completion of relevant risk assessments. It aims to emphasise the key points which are:- follow good practice, organise work properly, think 'avoid, prevent and minimise' and choose the right equipment to use. Finally, the course assesses the candidates understanding of the course material through use of a short theoretical test.

This WAH awareness training course acts as a valuable tool to the understanding of this Operation and Instructional Techniques Manual. The Manual explains Sayfa Systems' Aviator Fall Restraint/ Arrest System, its components, testing, fixing requirements, maintenance, load testing and compliance with British Standards etc. It also covers checking criteria of the safety systems used and correct use of static line and harness wear. The individual should therefore be well equipped to understand the systems within the manual, and to this end the candidate's certificate of operative instructional techniques (in recognition of successful completion of training) is included here.

Sayfa Systems UK Ltd encourages best practice and safe system of work at all times.

Sayfa Systems UK Ltd seeks to provide an effective delivery of training and education for work at height and rescue in accordance with BS 8454:2006

AVIATOR®
SAYFA

PAYLOAD®
SAYFA

THE SAYFA SYSTEMS AVIATOR™ FALL RESTRAINT/ ARREST SYSTEM

- **Easy to install modular system**
- **Complies to BS EN 795:2012 Class C**
- **Installed in accordance to BS 7883:2005**
- **Line shuttle provides continuous movement along the line without the need for disconnecting**
- **Components are manufactured from stainless steel**
- **25 year warranty if used in accordance with this operations guide and tested in accordance with BS EN 795:2012 Class C.**

TESTING

- The Sayfa Aviator™ system has been tested in accordance with all BS EN 795:2012 requirements.

FIXING REQUIREMENTS

- Sayfa Systems cannot warrant the roof structure strength. Assessment must be made by an engineer, unless it is clear to a competent person and there is adequate documentation from the manufacturer that, the structure is adequate and stable enough to have the Aviator system attached to it.
- The end support bracket and all intermediate supports brackets must be capable of withstanding a force of 13.0Kn (predicted maximum line tension.)
- Steel roof decks fitted with toggle type fixings must be a minimum 0.42 BMT
- Concrete/ friction type fixings must be installed as per BS EN 7883:2005 and must be proof load tested to a minimum 6Kn.
- All systems must be installed as per approved layout drawings.

MAINTENANCE

- All maintenance inspections must be in accordance with BS 795:2012 (12 months for Class C safety lines and 6 months for Abseil/ Window cleaning eyebolts)
- Anchors installed in concrete must be proof load tested during routine inspections.
- Cable and Line Shuttle must be cleaned if Shuttle does not slide properly. Use Sayfa CRC Dryglide only.
- All PPE to be tested in accordance with EN 795:2012

Continued on page 4

AVIATOR™ SYSTEM LINE LIMITS

- Maximum length of line between end anchors: **100m**
- Maximum spacing between intermediate brackets: **5 - 12m**
- Maximum no. of corners per system: **8**
- Maximum no. of users per system **2**
- Maximum inclination of cable using SAU260 shuttle: **15°**

Continued from page 3

LOAD TESTING

- Use Hydrajaws pull tester complete with bracket straddle.
- Concrete or friction fixings test to 6Kn for minimum 3 minutes.
- All other fixings eg: toggle style or gesipa rivets are not pull tested to avoid damage to the roof sheet/ deck
- End brackets coupled direct to pull tester.
- Intermediate brackets to have slave eye nut fitted before connecting to pull tester.

LIMITS OF USE

- Conformity can only be established if the sub-structure is free from any manufacturing defects or a drop in performance directly linked to its assembly or use (ageing, overload, chemical or climate erosion etc). An engineer must make an assessment regarding strength requirements.
- Conformity of the Sayfa Aviator™ system is only ensured if the user employs the correct PPE (harness, lanyard etc) that has been supplied by Sayfa Systems UK for the system that has been fitted.

  All PPE must conform to relevant BS standards in particular BS EN 354, BS EN 355, BS EN 358.
- Conformity of the system is only ensured if it is installed in accordance with Sayfa Systems guidelines and as per any layout drawings supplied.
- The Aviator™ safety line system must only be installed by qualified approved fitters who have been assessed and are monitored by Sayfa Systems UK.
- The Aviator™ safety line system is a fall restraint and fall arrest system and should never be used as a suspension cable or abseil point.
- Sayfa Systems strongly advise that the system is not used until full training has been undertaken by the user.

POSITIONING

- The static line should always be positioned so that the line is behind or above the user to minimise pendulum effect.
- The line is normally positioned minimum 2 metres and maximum 8 metres from the edge of the roof.

ROOF ACCESS LOG BOOK

- Only persons who have the necessary competence should use the system.
- Authorisation to access this area must be obtained (Roof permit if required)
- Use of full body harness with energy absorber complying with BS EN 361 must be used when connected to this system.
- In the event of a fall, damage or exposure to chemicals, the system must not be used until it has been inspected and re-certified.
- This system must be inspected every 12 months. Do not use this system if current date exceeds due service date.

This log book must be filled out prior to accessing roof.

Date	Name	Company	Time in	Time out	Sign

Note: This is a sample and may not cover all aspects of safety management. Please consult your H&S manager and obtain roof permit if required.

INSPECTION AND MAINTENANCE OF VERTICAL/HORIZONTAL STATIC LINES

DATE COMPLETED: PROJECT:
REPORT NO: .....

INSPECTED BY/COMPANY:.....

FOREMAN: .....

Checking criteria	Correct for use	Do not use until remedial works complete	Do not use condemned replace equipment	Comments
Must be no excess deformation in stanchions and intermediate anchors or evidence of excessive load				No. of stanchions checked: No. of intermediates checked:
Stanchions and intermediates must be secure ie. no rotation of eyebolt or movement in plate or bracket				
Must be no evidence of breakdown in the penetration seal				
Must be no evidence of slippage or deterioration of cable connection to stanchions				
Must be no evidence of deployment of system energy absorber				
Must be no evidence of wear, cuts, corrosion or fraying of cable				
Cable must be tensioned correctly and free from dirt				
Must be no evidence of shuttle undue wear, distortion or malfunction				
Static line support structure must be visually sound				
Static Lines must be set out correctly to ensure safe usage and no pendulum action				
Lines				

INSPECTION AND MAINTENANCE OF HARNESSES & EQUIPMENT

DATE COMPLETED:.....PROJECT: .....

REPORT NO: .....

INSPECTED BY/COMPANY:.....

FOREMAN: .....

Component	Checking Criteria	Correct for use	Do not use until remedial works complete	Do not use condemned replace equipment	Comments
Webbing	No cuts or tears				
	No abrasion damage especially where there is contact with hardware				
	No excessive stretching or loose threads				
	No damage due to contact with heat, corrosives or solvents				
	No deterioration due to rotting, mildew or ultraviolet exposure				
Snap hooks and karabiners	No distortion of hook or latch				
	No cracks or forging folds				
	No wear at swivels and latch pivot pin				
	Free movement of the latch over its full travel				
	No broken, weak or misplaced latch springs (compare if possible with a new snap hook)				
	Free from dirt or other obstructions, eg. rust				
Harness D-rings	No cracks, especially at the intersection of the straight and curved portions				
	No distortion or other physical damage of the D-ring				
	No excessive loss of cross-section due to wear				
Buckles and Adjusters	No distortion or other physical damage				
Ropes	No cuts, abrasions or fraying				
	No excessive stretching				
	No damage due to contact with heat, corrosives, solvents etc.				

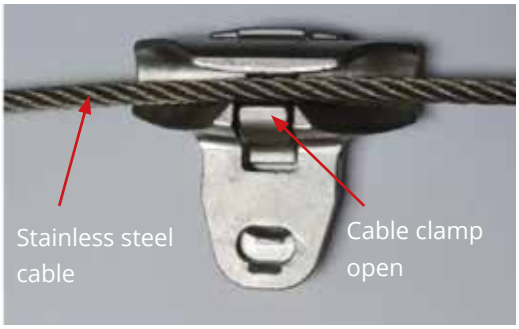
HELPLINE:
0845 241 9102

STATIC LINE TRAVELLER INSTRUCTIONS

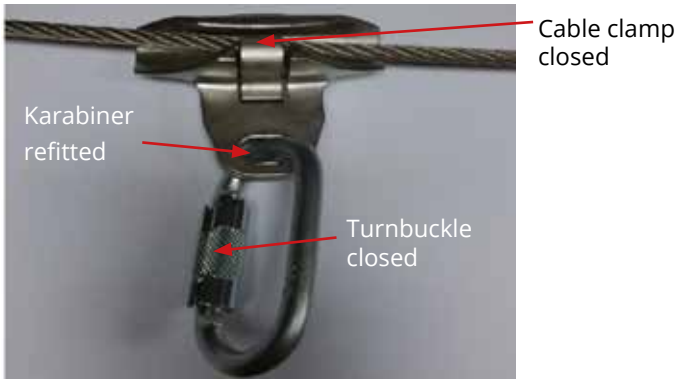
Correct attachment instructions.

1. Remove karabiner from the traveller

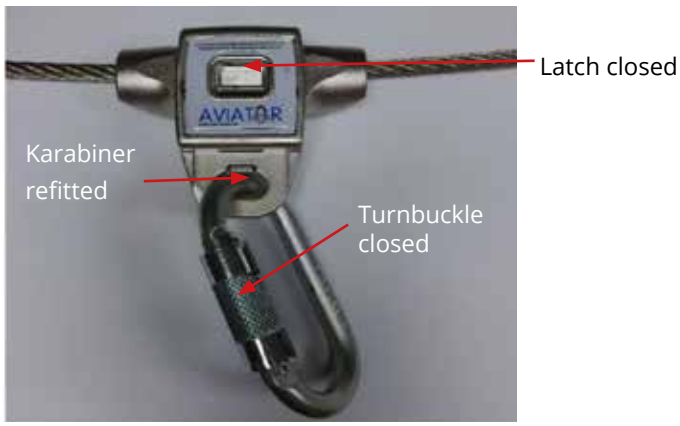
2. Slide the latch to the open position, the cable clamp will move open and allow attachment onto the stainless steel cable. This can be done anywhere on the system.



3. Slide the latch back to the closed position and the cable clamp will trap the stainless steel cable onto the traveller. Fit the karabiner back and ensure the turnbuckle is locked.



4. The Aviator static line traveller is now ready to use. To remove do points 1-3 in reverse. Always store karabiner in PPE kit bag when not in use. Correct operator training is required to use this product.



THE SAYFA GUIDE TO WEARING AND USING A SAFETY HARNESS

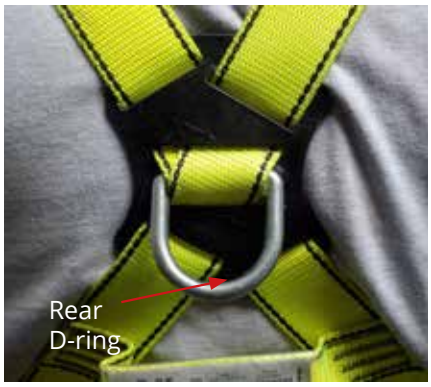
Please refer to our leaflet Ref:112-5/13 Safety Requirements for working at Height for more general guidance on the current legislation surrounding working at height.

A fall arrest system is the equipment required to secure a person to an anchorage point in such a way that a fall from height is safely arrested.

A full body harness is the only type of harness acceptable for use in a fall arrest situation, preferably with an additional front 'D' ring or attachment loops to provide for an effective rescue operation.

! Do not risk using Fall Protection equipment that does not have a visible serial number and a valid certificate of compliance.

SAFETY HARNESS FEATURES



1. Rear D ring

This is the basic attachment point on a harness for fall arrest.

It is suited to standard site work where the worker only needs to be attached for safety and does not need to work in suspension at height.

2. Front D-ring or anchorage loops

Linked with a karabina as an alternative to a fall arrest lanyard, inertia block or rescue equipment.

Generally more comfortable to be suspended in, they often prove to be invaluable in some rescue situations.

3. Strap adjustment buckle

Most of our harnesses have fully adjustable straps for a perfect fit.

HOW TO PUT ON A SAFETY HARNESS

1. Hold harness by the back D-ring. Shake harness to allow all straps to fall in place.

2. If chest, leg and/or waist straps are buckled, release straps and unbuckle now.

   At this stage, the lanyard should be attached to the D-ring with the shock absorber next to the harness.

3. Slip straps over shoulders so D-ring is located in middle of back between shoulder blades.

Check label is clearly readable with serial number and current certificate.

4. Pull leg strap between legs and connect to opposite end. Repeat with second leg strap. If belted harness, connect waist strap after leg straps.

5. Connect chest strap and position in mid-chest area. Tighten to keep shoulder straps taut. If harness has black elastic strap, thread strap through final slot to secure it.

6. After all straps have been buckled, tighten all straps so that the harness fits snugly but allows full range of movement. Press excess strap through loop keepers.

HOW TO PUT ON A SAFETY HARNESS (CONTINUED)

TIGHTNESS OF FIT

It is important to wear the harness at the right degree of tightness. The ideal tension guide is that the wearer should be able to get two fingers between the wearer's body and the straps. A loosely worn harness offers no protection. Any harness is designed to dissipate fall arrest forces into the thigh muscles; if worn loosely the straps will ride up transferring the force into the base of the spine and will cause spinal damage. Additionally it is possible to effectively fall out of the harness if it is worn too loosely.

INSPECTION ROUTINE

The harness should be checked for any visible damage before and after each occasion of use. Even a 1mm nick could cause the webbing to fail and may lead to a fatality. If unsure remove the harness from service and send to an authorised centre for a detailed inspection and re-certification.

In all events the harness should be subject to a certificated inspection at 3 monthly intervals. Spare harnesses should be made available to replace any taken from service.

RESPONSIBILITIES

It is the responsibility of the Contractor, Employer or End-user to ensure that fall protection equipment is used in compliance with current HSE regulations and NASC guidance, a suitable documented risk-assessment has been prepared and appropriate training given.

It is the responsibility of the employee or wearer to ensure that any equipment supplied is used responsibly and in accordance with the training given. Failure to do this could lead to a fine or even a prison sentence.

Remember: Never take an unnecessary risk and if in doubt ask!

SAYFA

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Ref: 136-06/19