

DRAPER

EN

Original Instructions  
Version 3  
June 2025

# 3 POINT FALL ARREST **SAFETY HARNES**

82471



UK  
CA CE

# 1. Preface

## 1.1 Product Reference

User Manual for: 3 Point Fall Arrest Safety Harness

Stock No: 82471

Part No: HNS/F/B

## 1.2 Revisions

Version 1: August 2015

First release

Version 2: February 2021

Version 3: June 2025

Please visit [drapertools.com/manuals](https://www.drapertools.com/manuals) for the latest version of this manual.

## 1.3 Understanding the Safety Content of This Manual

 **WARNING!** – Situations or actions that may result in personal injury or death.

 **CAUTION!** – Situations or actions that may result in damage to the product or surroundings.

**Important:** – Information or instructions of particular importance.

## 1.4 Copyright © Notice

Copyright © Draper Tools Limited.

Permission is granted to reproduce this manual for personal and educational use **ONLY**. Commercial copying, redistribution, hiring or lending is strictly prohibited.

No part of this manual may be stored in a retrieval system or transmitted in any other form or means without written permission from Draper Tools Limited.

In all cases, this copyright notice must remain intact.

# 2. Contents

|                                                     |     |
|-----------------------------------------------------|-----|
| 1. Preface                                          | 2   |
| 1.1 Product Reference                               | 2   |
| 1.2 Revisions                                       | 2   |
| 1.3 Understanding the Safety Content of This Manual | 2   |
| 1.4 Copyright © Notice                              | 2   |
| 2. Contents                                         | 2   |
| 3. Product Introduction                             | 3   |
| 3.1 Application                                     | 3   |
| 3.2 Limitations                                     | 3   |
| 3.3 Specification                                   | 3   |
| 4. Health and Safety Information                    | 4-5 |
| 4.1 General Safety Instructions for this Equipment  | 4   |
| 4.2 Component Compatibility                         | 4   |
| 4.3 Connector Safety                                | 4   |
| 4.4 User Responsibility                             | 5   |
| 4.5 Training                                        | 5   |
| 5. Identification and Unpacking                     | 6   |
| 5.1 Product Overview                                | 6   |
| 5.1 Packaging                                       | 6   |
| 6. Instructions for Use                             | 7-9 |
| 6.1 Dorsal Attachment Point                         | 7   |
| 6.2 Required Ground Clearance                       | 7   |
| 6.3 Anchor Points                                   | 8   |
| 6.4 Fitting the Harness                             | 8   |
| 6.5 Adjustment and Suspension Test                  | 8   |
| 6.6 Buckle Connection                               | 9   |
| 7. Maintenance                                      | 9   |
| 8. Inspection Instructions                          | 10  |
| 9. Product Lifespan                                 | 10  |
| 9.1 Expected Lifespan                               | 10  |
| 9.2 Knowing when to retire the Harness              | 10  |
| 9.3 Product Obsolescence                            | 10  |
| 10. Spares, Returns and Disposal                    | 11  |
| 11. Warranty                                        | 11  |
| 12. Product Marking                                 | 11  |
| 13. Explanation of Symbols                          | 11  |
| 14. Record Sheet                                    | 12  |

3.1 Application

This product is a fall arrest harness for use when working at height or where a risk of free fall exists. It is suitable for use as a component of a fall arrest system to connect a safety harness to an anchor point.

This harness shall not be used for work positioning, as a restraint system or rescue system.

This product may be used to arrest a single fall **ONLY**. **DO NOT** tamper with this product.

**Important:** Users **MUST** be competent and responsible or under the direct and visual control of a competent and responsible person.

Any other application beyond the conditions established for use will be considered misuse.

Draper Tools accepts no responsibility for improper use of this product or any consequence, direct, indirect or accidental, or any other type of injury or damage resulting from the use of this product.

Read this manual in full before attempting to use, inspect or maintain the product, and retain it for later use.

This product is an item of Personal Protective Equipment (one person only) in accordance with the PPE Regulation (EU) 2016/425 and complies with standard: EN 361:2002.

3.2 Limitations

The following limitations to the capability of this product must be recognised and considered before use.

**Important:** **DO NOT** use this product for applications beyond the capabilities of the equipment.

This product is a component of a fall arrest system and contributes to stopping a free fall when it occurs. It **DOES NOT** prevent free fall from occurring.

It is the responsibility of the user to ensure that there is sufficient fall clearance to avoid impact with the ground or other obstacles should free fall occur. The fall clearance must be calculated before each use according to the position of the anchor points relative to the connection to the harness. **ALWAYS** ensure that a sufficient safety clearance is included in the calculation. For more information, see **6.2 Required Ground Clearance**.

**Important:** When used in environments in which additional physical and environmental hazards may reduce the effectiveness of this product, additional risk assessments and precautions must be observed to reduce the likelihood of injury to the user or damage to the equipment. Such hazards include, but are not limited to, extremes of temperature, prolonged exposure to weather, chemicals and corrosive environments, ultraviolet light, live electrical conductors, gases and explosive materials or vapours.

3.3 Specification

|           |           |
|-----------|-----------|
| Stock No. | 82471     |
| Part No.  | HNS/F/S   |
| Model No  | 100119    |
| Material: | Polyester |

# 4. Safety Instructions and Obligations



**WARNING!** Applications for which this product is required are inherently dangerous. **DO NOT undertake any activity that requires the use of this product unless you fully understand and accept the risks involved and are confident in the correct and safe use of the equipment.**



**WARNING!** Failure to comply with these safety instructions may result in serious injury or death.

## 4.1 General Safety Instructions for this Equipment

- **NEVER** use this product for any other purpose than that for which it was designed.
- **ONLY** techniques presented in this manual that are not crossed out or not otherwise indicated as incorrect are permitted when using this product.
  - Contact Draper Tools for support if you have any difficulty in understanding the information or images in this document.
- **DO NOT** modify this product in any way without written consent to do so from the Draper Tools or the manufacturer.
- All product markings must always remain visible and legible.
- Before use verify the suitability of this harness for the application being carried out.
- Any maintenance or repair **MUST** be carried out in accordance with these instructions.
- If the product is resold outside the original country of destination, the onward vendor must provide these or other sufficient instructions for use, maintenance and periodic examination in the language of the country in which the product will be use.
- **Inspect the harness before and during each use:**
  - Check the webbing at the attachment points, adjustment buckles and at the safety stitching.
  - Look for cuts in the webbing, wear and damage during use. Carefully check for cut threads.
  - Verify that the buckle operates correctly.
  - Contact with heat and chemical products.



**WARNING!** The performance of the harness may deteriorate under the following conditions: **Excessively high temperatures, effect of sharp edges, chemical reagents, electrical conductivity, abrasions, UV degradation and other climate conditions.**

## 4.2 Component Compatibility

- **ALWAYS** ensure that components used within the same fall arrest system are compatible with each other.
  - Components are compatible if they have been designed to work together in such a way that their shape and size do not cause jamming or inadvertent opening of their gate mechanisms, regardless their orientation.
  - **Important:** Components must also be compatible with the anchor points and other system components.
- This Harness may **ONLY** be used with Draper stock numbers: Safety Lanyard 82473 and Safety Karabiner 82472.
  - The harness must be able to adjust to your body and fit snugly to reduce the risk of injury during a fall.
- Incompatible connections can cause accidental detachment or breakage or may impede the safety capabilities of other equipment.
- **DO NOT** combine components in any way where the safe function of any one item is interfered with or affected by the safe function of another.
- **ALWAYS** adhere to all instructions supplied with other components of the fall arrest system.

## 4.3 Connector Safety

- Karabiners must always be used with the gate closed and locked. Systematically verify the gate is closed by pressing it with your hand. Inspect the connectors as recommended in their instructions.
- Ensure the body, gate and locking sleeve are free from any cracks, deformation, corrosion etc. Open the gate and verify that it closes itself when released.
- Verify the locking sleeve operates properly. The keylock slot (gate) must not be blocked by any foreign matter.



### **WARNING!**

- The attachment points of the harness can act as a lever on the gate of a connector.
- When sudden tension comes onto the rope and/or an external pressure on the locking system and if the connector is poorly positioned, the locking sleeve can break, and the gate can open. To reduce this risk, check the connectors each time the system is loaded.

## 4.4 User Responsibility

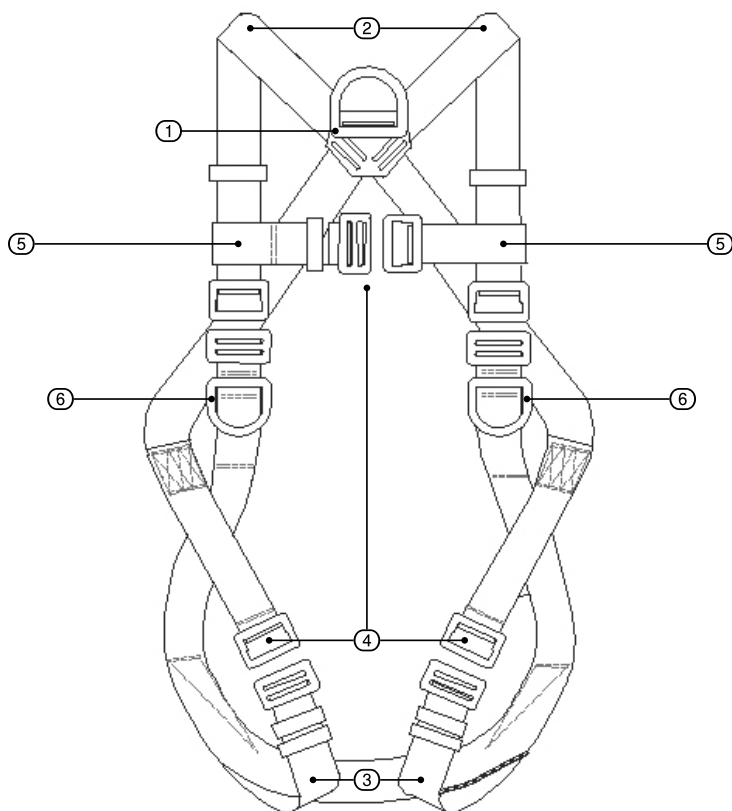
- If the risk assessment carried out before the start of work shows that loading in the case of a use over an edge is possible, appropriate precautions should be taken.
- To avoid the risk of a fall, move away from areas where a fall hazard exists when adjusting the harness.
- Responsibility for actions and decisions while this product is in use rests **SOLELY** with the user.
- Before using this equipment, you must:
  - Read and understand these instructions in full.
  - Ensure that you are specifically trained in the proper and safe use of this product.
  - Ensure that you are adequately trained in the necessary rescue techniques.
  - Ensure you are fully aware of the capabilities and limitations of this product.
  - Familiarise yourself with and accept the risks associated with the application.
  - Ensure that your operation complies with applicable local regulations and additional standards relating to occupational safety.
- **DO NOT** use this equipment if you are not medically fit to work at height.
  - If required, consult your doctor or a trained medical professional to assess your fitness to absorb the forces of a fall arrest before using this product.
- **DO NOT** use this equipment if you are pregnant or suffer from any condition that may increase the likelihood of injury sustained during a fall arrest or that may prevent you from safely and correctly operating this equipment during normal or emergency operation.
- Calculate the required ground clearance before **EVERY** use, taking into account user height and weight.
- **ALWAYS** use a reliable anchor point.
- **NEVER** use this equipment to lift, hang or support equipment.
- It is recommended that this equipment is issued as a personal item so that users are familiar with the entire use history of the item.

## 4.5 Training

- The undertaking of training specific to this equipment before use is **ESSENTIAL**. This product may only be used by competent and responsible personnel or those placed under the direct and visual control of a competent and responsible person.
- Acquisition of adequate training in appropriate techniques and methods of protection is the responsibility of the user. The user assumes all risk and responsibility for damage, injury or death that may occur during or following incorrect use of this product in any form.
- If you are unable or unwilling to assume this responsibility or accept the associated risks, **DO NOT** use this equipment.

## 5. Identification and Unpacking

### 5.1 Product Overview



- (1) EN361 dorsal attachment point
- (2) Shoulder straps
- (3) Leg loops

- (4) Double back adjustment buckle
- (5) Sliders
- (6) Frontal attachment points

### 5.1 Packaging

Keep the product packaging for the duration of the warranty period for reference should the product need to be returned for repair.



**WARNING! Keep packaging materials out of reach of children. Dispose of packaging correctly and responsibly and in accordance with local regulations.**

Please visit **[drapertools.com](https://www.drapertools.com)** for our full range of accessories and consumables.

# 6. Instructions for Use

**Important:** Before use, read and understand all the safety information and instructions listed in this manual and the manuals for any additional safety equipment being used in conjunction with this harness.

The product must be thoroughly inspected before **EVERY** use; see **8. Inspection Instructions**.

## 6.1 Dorsal Attachment Point (Fig.1 – Fig.2)

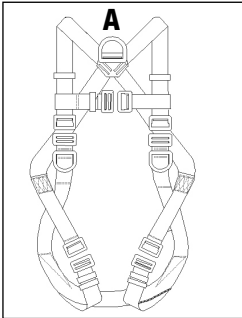


Fig. 1

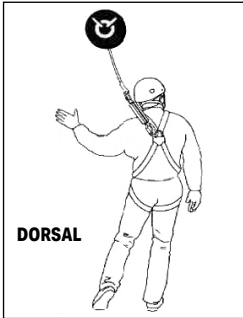


Fig. 2

- The point marked with 'A' is used only with a fall arrest system combined with an energy absorber lanyard (82473), safety karabiner (82472).
- **ONLY** the karabiner should be connected to the harness.

## 6.2 Required Ground Clearance (Fig.3)

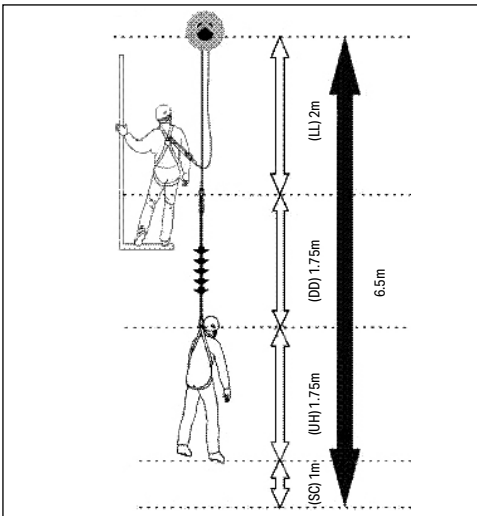


Fig. 3 - Example ground clearance calculation

**Important:** It is **ESSENTIAL** that the required ground clearance is calculated before **EVERY** use. The required ground clearance is the minimum distance required between the anchor point and the nearest lower level.

There must be no obstacles present within this distance, ensuring that the user can fall unimpeded without impacting on the ground or other intermediate object.

Ground clearance is calculated between from the anchor point. The total required ground clearance is calculated by adding together the following values:

- **Lanyard length (LL):**

The total vertical distance below the anchor point that the user will fall before the lanyard begins to arrest the fall. The 82473 lanyard is fixed at 1.82m in length (round to 2m).

- **Deceleration distance (DD):**

Accounts for the extension of the energy absorber and displacement and stretching of the harness.

- **User height (UH):**

The height of the user.

- **Safety clearance (SC):**

A minimum clearance value to prevent the user's feet from contacting the ground or platform. This value must be at least 1m.

**Required ground clearance: 6.5m**

**Important:** These values are calculated using a body mass of 100kg. Where the body mass of the user exceeds this value or their height exceeds 2m, the calculation must take into account these differences. A greater safety clearance distance is required for users of over 100kg.

**Important:** Keep in mind that the free fall distance (the distance that the harness attachment travels from the start of the fall until the lanyard begins its arrest) will vary according to the position of the anchor point in relation to the working level. An increased free fall distance will apply greater force to the fall arrest system than one that is lower. This is known as Fall Factor.

**Important:** Also assess the likelihood of injury from swing falls in which the user does not fall directly downwards. Swing falls occur when the anchor point is not vertically aligned with the body, causing the user to arc towards around the anchor point when falling. Ensure that the surrounding area is free from any obstructions that might impede a swing fall.

### 6.3 Anchor Points

**Important:** It is essential that the chosen anchor points are positioned in such a way to minimise the likelihood of free fall and the potential for fall damage. The work should also be carried out in such a way to minimise this risk.

Anchor points are the fixtures at which the fall arrest system is fixed to the wall or platform. Where possible, anchor points should be located level to or above the point at which the harness is attached to the fall arrest system. This reduces the total ground clearance from a maximum of 4m to 2m or less. Anchor points should also be directly in line vertically with the body as much as possible to reduce the likelihood of swing falls.

Anchor points must be able to withstand a minimum of 12kN (2,700lbf) of force from a fall. Use certified, permanently installed anchor points where possible.

### 6.4 Fitting the Harness (Fig.4 – Fig.6)

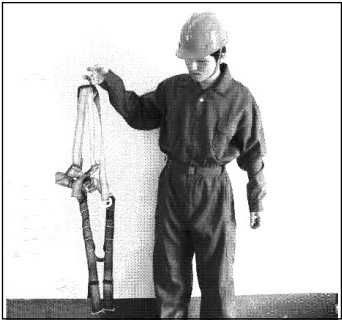


Fig. 4

1. Open the leg loop (3) buckles and step in.



Fig. 5

2. Hold the shoulder straps (2) and put the harness on like a jacket.



Fig. 6

3. Fasten and adjust the leg loops.
4. Adjust the shoulder straps.
5. Stow the excess webbing using the strap retainer on the shoulder strap.
6. Close the harness.

### 6.5 Adjustment and Suspension Test (Fig.7)



Fig. 7

- The harness must be adjusted to fit snugly to reduce the risk of injury in case of a fall.
- Move around and carry out a suspension test (hang in the harness) from the dorsal attachment point with your equipment to verify that the harness fits and adjusted correctly.



## 6.6 Buckle connection (Fig.8 – Fig.10)

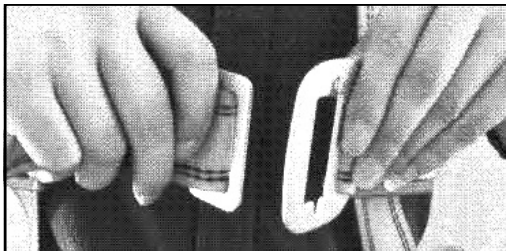


Fig. 8

- Ensure the straps are not twisted.
- 1. Use the loose end of the webbing for adjustment and always locate on the outside away from the user (Fig.8).
- 2. Pass the buckle with the centre bar under the square link.
- 3. Turn the centre bar buckle so that the edges align with the slots in the square link.

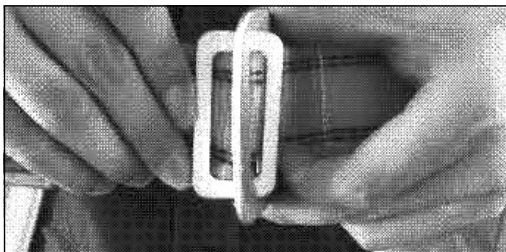


Fig. 9

- 4. Pull the centre bar buckle completely through the square link and allow to fall into place on top the square link (Fig.9).
- 5. Pull the loose ends of the to adjust and tighten the harness.

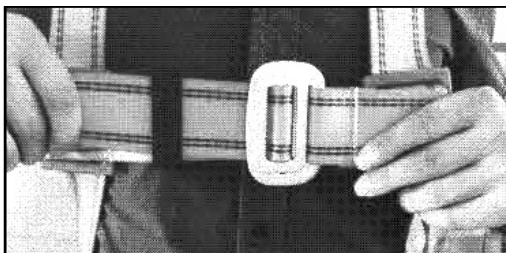


Fig. 10

- 6. Then move the slider on the chest strap up to the buckle and tuck in any excess webbing. (Fig.10).

**Important:** This equipment must be regularly checked and cleaned to ensure that it remains in good working condition. Poor product care can compromise the integrity of the equipment and reduce its capability during a fall arrest.

**Important:** These instructions must be strictly adhered to in order to maintain the integrity of this equipment.

- Clean the straps and buckles with water and mild soap.
- Wipe the harness with a cotton cloth or soft brush.



**CAUTION! DO NOT use chemicals, solvents or aggressive substances to clean the product.**

- Wipe the metal connectors with a clean, dry cloth **ONLY**.
- For intensive cleaning wash the harness in water and a neutral detergent, with a temperature between 30°C and 60°C. **DO NOT** exceed 60°C.
- When the equipment becomes wet, either during use or as a result of cleaning, allow all parts to dry naturally.



**CAUTION! DO NOT apply direct heat to dry the equipment.**

- Transport the harness in bag provided and take all necessary precautions to protect the equipment from moisture, chemicals, UV light, heat, sharp edges and impact forces during transportation.
- Store the product in a clean and dry environment, out of direct sunlight and out of reach of children.
- Ensure that the storage environment and procedures protect the equipment from factors that may affect the condition of the equipment, including moisture, sharp edges, vibrations and exposure to ultraviolet light.

## 8. Inspection Instructions

**Important:** The safety of users is subject to the continued efficiency and durability of this equipment. The equipment must be inspected before every use and, additionally, an in-depth examination must be carried out at least once every **twelve months**. Where the equipment is frequently used or used in harsh conditions, in-depth inspections should be carried out more regularly.

All inspections must be carried out by a competent and trained individual. All periodic in-depth inspections must be documented, with any findings recorded. The name and signature of the inspector must also be recorded, along with a deadline for the next periodic in-depth inspection. See **14. Record Sheet** for an example equipment control card.

**Important:** This is a **single-use product**. Retire the equipment if it shows any evidence of previous use to arrest a fall. Inspections must cover all aspects of the equipment and any other parts of the fall arrest system.

- Visually examine the equipment for at least the following:
  - Evidence of previous use to arrest a fall, including tearing or stretching of the webbing
  - Excessive wear or stretching, fraying or separation
  - Damage or rust to metal fixings
  - Cuts and abrasions
  - Mould, mildew or corrosion
  - Exposure to chemicals or aggressive substances
  - Evidence of ink or paint on the nylon webbing
  - Burns or damage from exposure to heat
  - Deformity or discolouration
  - Alterations
  - All safety markings are legible and unambiguous

**Important:** **ALL** safety markings must remain legible throughout the lifetime of the equipment.

- Withdraw the equipment from service immediately if the equipment exhibits any of the above or there any reason to doubt that the equipment is safe for use.  
**DO NOT** use it again until a competent person has confirmed in writing that it is safe to do so.
- If it cannot be made safe for use, retire the equipment.

**Important:** Retired equipment must be destroyed to avoid the risk of reuse.

## 9. Product Lifespan

**Important:** This product may be used to arrest one fall **ONLY. DO NOT** use this equipment again.

Draper Tools recommends that this equipment is issued as a personal item to one user only to ensure that the user is completely aware of the history of the item and assumes full responsible for its condition and safety.

### 9.1 Expected Lifespan

The actual lifetime of the product ends when it meets one of the retirement criteria (see **9.2 Knowing when to Retire the Product**) or when it is judged to be obsolete.

The actual lifetime is influenced by a number of factors, including the intensity, frequency and environment of use; user competence; the appropriateness of storage arrangements and the quality of product maintenance during its lifetime.

**Important:** Exceptional events may terminate the life of the product. These include, but are not limited to, exposure to chemicals, extreme temperatures, sharp edges and heavy loads.

Inspect the equipment frequently and regularly for signs of deployment, damage and deterioration; see

**8. Inspection Instructions.**

### 9.2 Knowing when to retire the Harness

- This equipment should be immediately retired if any of the following conditions occur:
  - It fails to pass an inspection before or during use, or a periodic in-depth inspection.
  - It has been subjected to a major fall or load.
  - It is more than 10 years old (Check manufacture date on harness label).
  - Its full history is not known.
  - There is any doubt over the integrity of the product.

**Important:** Retired equipment must be destroyed immediately to prevent further use.

### 9.3 Product Obsolescence

- The equipment may be judged to be obsolete and retired before the end of its actual lifetime. This may occur in situations including:
  - Changes in applicable standards or legislation
  - Development of new equipment or techniques
  - Incompatibility with or replacement by other equipment

Where obsolete equipment is no longer recommended for use, dispose of it to prevent further use.

For spare parts, servicing, and repair and replacement options, please contact the Draper Tools Product Helpline for details of your nearest authorised agent.

Draper Tools will endeavour to hold any spare parts, if applicable, for seven years from the date that it sells the final matching stock item.

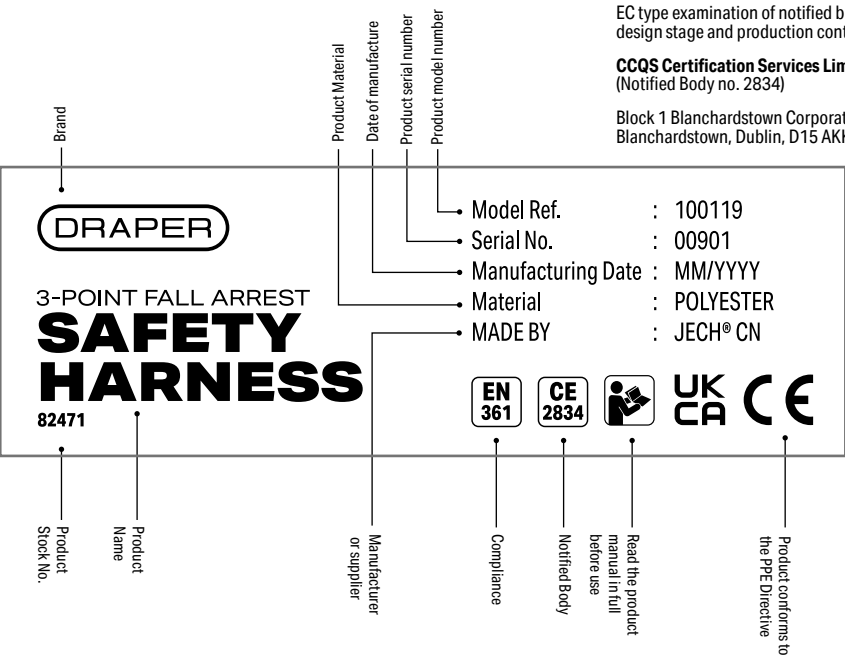
Any servicing or repairs carried out by unauthorised personnel or installation of spare parts not supplied by Draper Tools will invalidate your warranty.

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

11. Warranty

For Warranty information  
Visit [drapertools.com/warranty](http://drapertools.com/warranty) for full details.

12. Product Marking



13. Explanation of Symbols



Read the instruction manual



UK Conformity Assessed



European conformity



Compliant with EN 361



Notified Body

EC type examination of notified body involved with the design stage and production control phase are performed by:

**CCQS Certification Services Limited**  
(Notified Body no. 2834)

Block 1 Blanchardstown Corporate Park, Ballycoolin Road,  
Blanchardstown, Dublin, D15 AKK1, Ireland

# 14. Record Sheet

| 3 Point Fall Arrest Safety Harness |                 |                                |          |                  |          |                       |                 |
|------------------------------------|-----------------|--------------------------------|----------|------------------|----------|-----------------------|-----------------|
| Manufacturer                       | Name            |                                |          |                  |          |                       |                 |
|                                    | Contact details |                                |          |                  |          |                       |                 |
| Date of manufacture                |                 | Potential lifetime expiry date |          | Date of purchase |          | Date put into service |                 |
| Model                              |                 | Serial Number                  |          | Name of user     |          |                       |                 |
| Other information                  |                 |                                |          |                  |          |                       |                 |
|                                    |                 |                                |          |                  |          |                       |                 |
| Inspection                         |                 | Reason for entry               | Examiner | Result           | Comments | Signature             | Next Inspection |
| No.                                | Date            |                                |          |                  |          |                       |                 |
| 1                                  |                 |                                |          |                  |          |                       |                 |
| 2                                  |                 |                                |          |                  |          |                       |                 |
| 3                                  |                 |                                |          |                  |          |                       |                 |
| 4                                  |                 |                                |          |                  |          |                       |                 |
| 5                                  |                 |                                |          |                  |          |                       |                 |
| 6                                  |                 |                                |          |                  |          |                       |                 |
| 7                                  |                 |                                |          |                  |          |                       |                 |
| 8                                  |                 |                                |          |                  |          |                       |                 |

This record must be kept with the corresponding equipment (traceable by the serial number) for the full duration of the life of the product.