



TYPE 2 SELF RETRACTING DEVICE (SRD)



RDC011P	11 ft	(3.3 m)
RDC015P	15 ft	(4.6 m)
RDC020P	20 ft	(6.1 m)
RDC030P	30 ft	(9.1 m)
RDC050P	50 ft	(15.2 m)
RDC075P	75 ft	(22.8 m)

Meets or exceeds standards and requirements established by:

CSA Z259.2.2-98
ANSI Z359.14-2012
ANSI A10.32.2004
OSHA 1926.502

WARNING MESSAGES ARE INSERTED THROUGHOUT THE MANUAL AND HIGHLIGHT NECESSARY STEPS TO ENSURE SAFE WORKING CONDITIONS.

READ THESE WARNINGS FIRST

- The SRD is only part of a total fall protection system and the use of compatible hardware and components is mandatory. The system components must meet federal, state, local or provincial regulations before being incorporated in a personal fall protection system. If you have any concerns or questions, please contact your distributor or Safety Direct.
- Never clamp, knot or prevent the lifeline from retracting or being taut.
- Avoid working above the anchorage level to avoid an increased free fall distance.
- It is imperative for the safety and efficiency of operations that this manual be read and fully understood by the worker before using any fall arrest system. ALL instructions contained herein must be carefully read and strictly followed.
- A fall could result in serious injury or death. Do not use any equipment unless properly trained.
- The limit of one person only per fall arrest system must always be observed.
- Do not let go of the wire rope until it has completely rewound inside the SRD.
- The user must not exceed an angle of 30° and never move away from the vertical axis of the SRD for more than 10 ft. (3 m) (Figure 7).
- Care should be taken to avoid contact with all sharp edges which could cut the wire rope.
- Ensure adequate clearance exists in your fall path to prevent striking an object (Figure 4 and Figure 6). When the SRD is installed on a non-rigid anchor point, ensure the deflection of the system is taken into consideration within the calculation of the total clearance required.
- For all assembly configurations:
The anchoring to the structure must allow self-alignment of the SRD under the effect of the force exerted on the wire rope.

*WARNING - A FALL COULD RESULT IN SERIOUS INJURY OR DEATH.
DO NOT USE ANY EQUIPMENT UNLESS PROPERLY TRAINED.*

SRD RETRACTABLE USE AND MAINTENANCE INSTRUCTIONS

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1. YOUR RESPONSIBILITY FOR COMPLIANCE

- 1.1. It is the workers and their employers' responsibility to strictly conform to the following warnings.
- 1.2. In all circumstances, if a fall arrest system, or any of its components are to be used by a worker not being directly supervised, you must provide a copy of these instructions and advise the worker that all instructions must be strictly followed. A fall could result in serious injury or death.
- 1.3. Before using any fall arrest system, the worker and employer must become aware of all the requirements of federal, state, provincial and local safety regulations applicable to the use of the fall arrest system and any component thereof. Components of a fall arrest system must be compatible and recommended by Safety Direct or the manufacturer of the device/system.
- 1.4. Never use a fall arrest system or any components for any applications other than specified by the instructions supplied by the manufacturer of that device. Do not alter or adapt the equipment in any way.
- 1.5. Any harness, lanyard, rope grab, self-retracting lifeline or hardware that has been subjected to a fall, must be removed immediately from service. The harness, lanyard, rope grab or hardware must be destroyed and replaced. The SRD must be sent to Safety Direct or authorized dealer for inspection and recertification.
- 1.6. The combination of the user's weight, clothing and tools may not exceed 310 lbs. (140 kg). If this weight is exceeded the performance and safety of the SRD cannot be guaranteed.
- 1.7. This manual is intended to meet the "Manufacturer's Instructions" as required by CSA Z259.2.2-98 and ANSI Z359.14-2012 and should be used as part of an employee training program as required by OSHA.
- 1.8. Keep this guide available at all times for easy reference whenever required. Extra copies can be printed from the Safety Direct web site.

2. YOUR RESPONSIBILITY FOR INSPECTIONS

- 2.1. Carefully take notice of all labels affixed to all components of the fall arrest system. Never use any equipment if the label normally fixed on fall arrest components is obscured or missing.
- 2.2. Every time a fall arrest system is used, check the components of the system before proceeding. They must be complete, compatible and in good working condition.
- 2.3. Careful and regular inspection of the fall arrest system's installation is part of the safety requirements. If you have any questions, contact Safety Direct.

3. YOUR RESPONSIBILITY FOR TRAINING AND SUPERVISION

- 3.1. The state of health of the worker must allow them to withstand a possible fall arrest on the system being used. A worker must not be required to use a fall arrest system if that worker is not:
 - mentally and physically fit for the purpose, especially at heights or in confined spaces;
 - free from the influence of alcohol or drugs;
 - competent for the job to be performed;
 - familiar with the equipment and all applicable safety rules, requirements or regulations;
 - trained for working under the above requirements.
- 3.2. Except for the operations described in this manual, the maintenance of Safety Direct equipment, as well as repair, must be exclusively done by authorized (written approval) Safety Direct dealers or by Safety Direct.
- 3.3. Never let a fall arrest system be managed or used by anyone other than authorized and assigned persons to the job. While out of operation, keep equipment installed or stored out of reach of unauthorized persons.
- 3.4. Prior to putting the systems into operation, rescue procedures should be set up and workers should be trained in the event a fall occurs during a job. Such procedures must be set up by a qualified person or technical consultant according to work conditions.
- 3.5. Every job must be placed under the control of a person having the required qualification and authority for checking that all the instructions prescribed by this manual are regularly and efficiently carried out. Contact Safety Direct for training information.

4. YOUR RESPONSIBILITY FOR COMPONENTS OUTSIDE FALL ARREST SYSTEM

- 4.1. Components of the installation other than the SRD must meet the requirements of the applicable regulations and legislation. They must be of the specified quality and must be assembled as a safe and efficient fall arrest system.
- 4.2. Anchor points are to have a minimal strength of 5,000 lbs. (22 kN), be sufficiently strong and in accordance with federal, state, provincial and local regulations.
- 4.3. All requirements in strengths and resistance must be obtained with the necessary safety coefficients.
- 4.4. Prior to commencing the job, all calculations, design and subsequent work necessary to the above requirements must be made by a qualified person on the basis of technical information regarding the site.

5. YOUR RESPONSIBILITY FOR RISK ASSESSMENT

- 5.1. For any job to be performed, consider and control the specific risks related to the nature of the job.
- 5.2. After inspection, should you determine that a fall arrest system, or any component, is no longer to be used, take precautions to remove it so that it cannot be reused. It has to be discarded or disposed of, and precautions must be taken so that it cannot be reused.

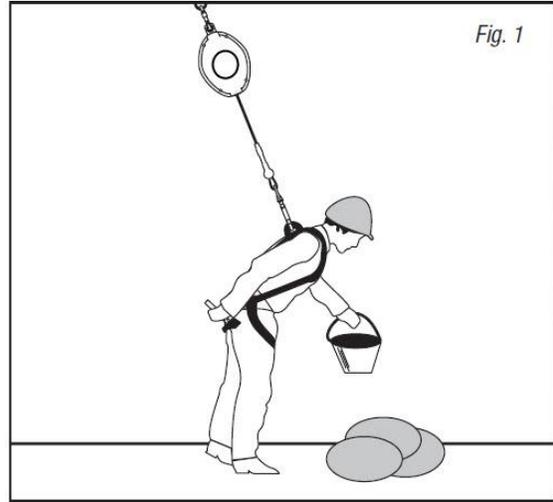
- 5.3. During a rescue, the line or lines should be attached only to the dorsal D-ring and/or to both shoulder mounted D-rings of the harness if so equipped.

6. DESCRIPTION

6.1. The SRD is a portable device supporting the following features:

- lightweight;
- easy to attach as the connector is kept in an upright position;
- high strength polymer housing has no sharp edges.
- galvanized steel cable.
- load indicating swivel snap hook

6.2. The function of the SRD is to automatically stop a person's fall. The SRD is primarily intended to connect to a structure while the user is moving vertically directly under the SRD (Figure 1). The SRD can also be used in other positions as outlined in the Figure 8 and Figure 9 on page 7.



- 6.3. The user is attached to the SRD by a wire rope whose length is automatically adjusted by a retracting spring that activates a drum on which the wire rope is coiled.
- 6.4. In the event of a fall, the drum is locked by brass pawls which engage in a ratchet wheel under the effect of the centrifugal force caused by the acceleration of the falling mass attached to the wire rope. The fall is stopped gradually by the friction of a disk braking system.
- 6.5. Because the wire rope is constantly tensioned between the user and the SRD, the user's free fall distance is held to a minimum by the disk braking system.
- 6.6. Always choose an SRD where the wire rope length fits the expected distance travelled by the user.

7. INSTALLATION

7.1. Anchoring to the structure

7.1.1. An anchorage point is a secure point of attachment for lanyards, lifelines or self-retracting lifelines. It has to be independent of the means of supporting the worker and must have been selected by a qualified person. The SRD must be connected to an anchorage point capable of supporting a minimum of 5,000 lbs. (22 kN) per attached worker. Consult governing regulations as revisions occur.

7.1.2. Never use an anchorage point that will not allow the carabiner or connecting device to close. The anchor must be compatible with the carabiner or connecting device and must not cause a load to be applied to the gate.

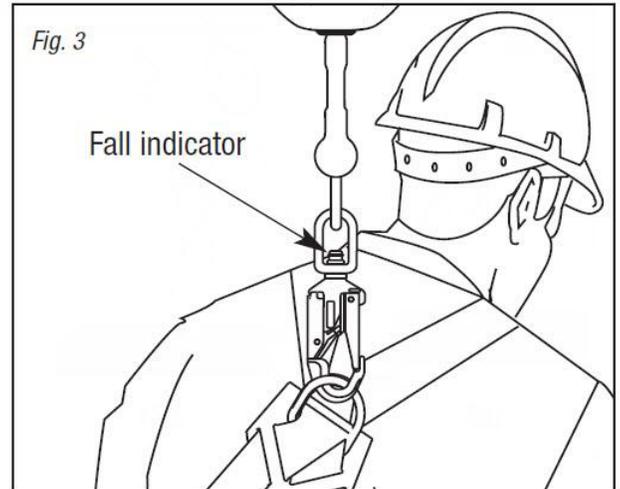
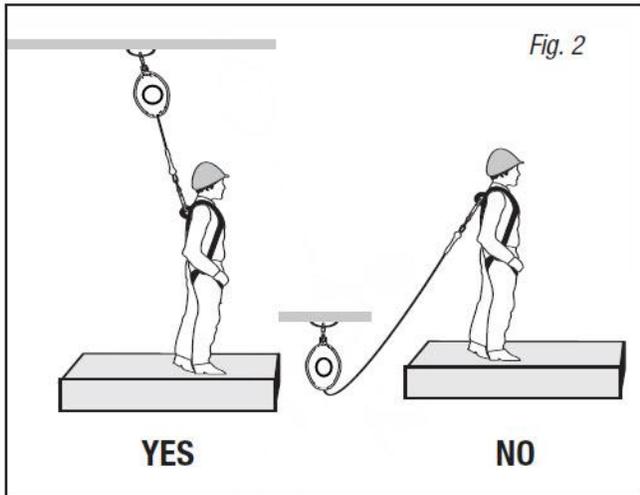
7.2. Connecting to the harness

7.2.1. It is mandatory to use a full body harness for fall arrest.

7.2.2. Connect components on a safe surface where there is no risk of falling.

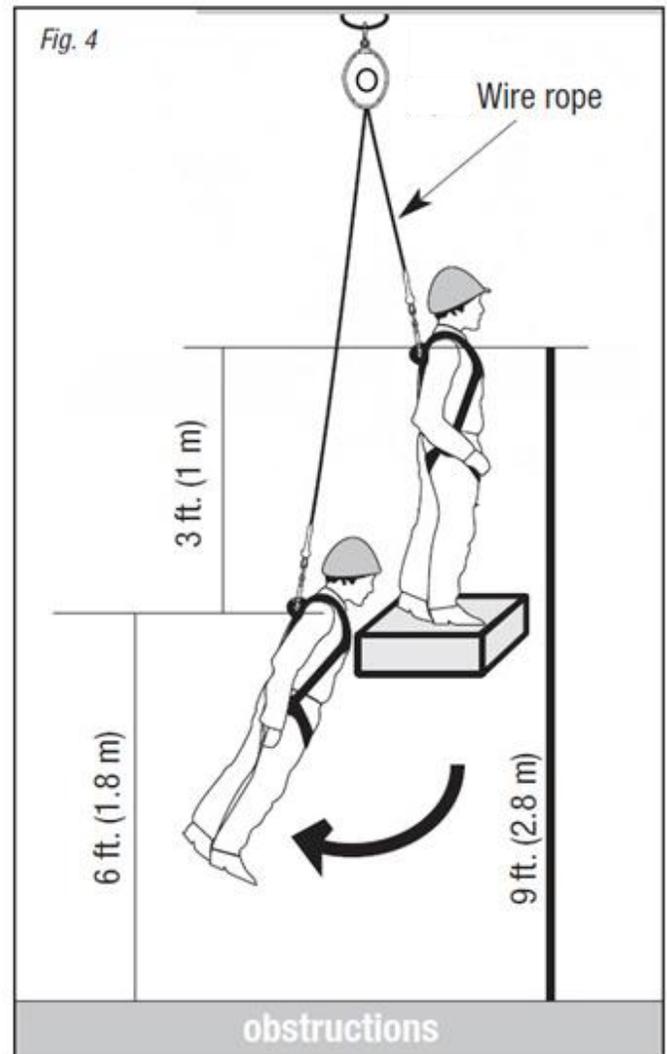
7.2.3. The point at which the harness is attached must be below the SRD (Figure 2).

7.2.4. The self-locking snap hook fitted on the end of the wire rope must be attached to the back D-ring of the user's harness. It has a visual fall indicator that becomes visible after a fall (Figure 3).



7.3. Clearance

The clearance must be greater than 6 ft. (1.8 m) (Figure 4). When the SRD is installed on a non-rigid anchor point, ensure the deflection of the system is taken into consideration within the calculation of the total clearance required.

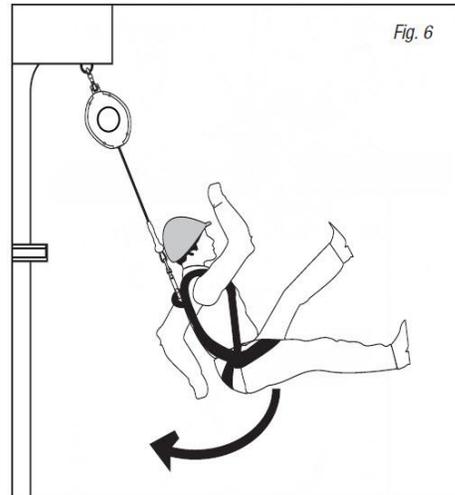
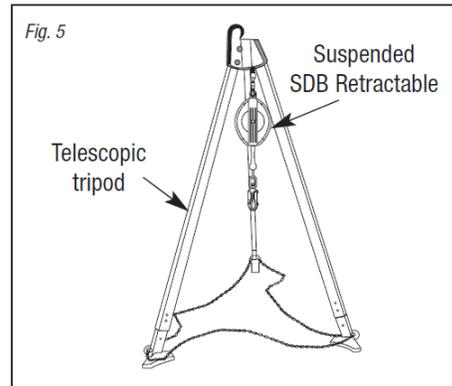


7.4. Assembly Configuration

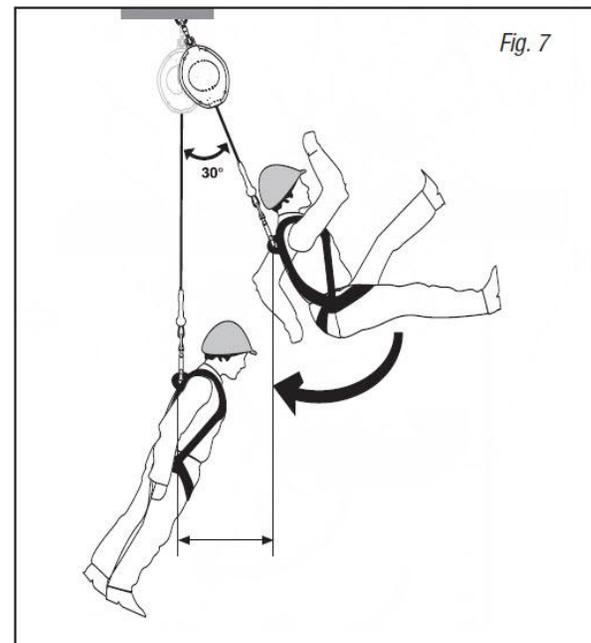
The most commonly used configuration is where the SRD is attached to a structure and the user moves vertically directly under the SRD.

7.4.1. In another configuration, the SRD is suspended from a tripod (Figure 5).

7.4.2. If the longitudinal axis of the SRD is at an angle to the vertical, a qualified person must check that all the risks connected with this configuration have been correctly taken into account. Safety Direct recommends that the worker avoid moving away from the vertical plane. In the event of a fall, one will swing from side to side and may hit an obstacle causing injury (Figure 6).

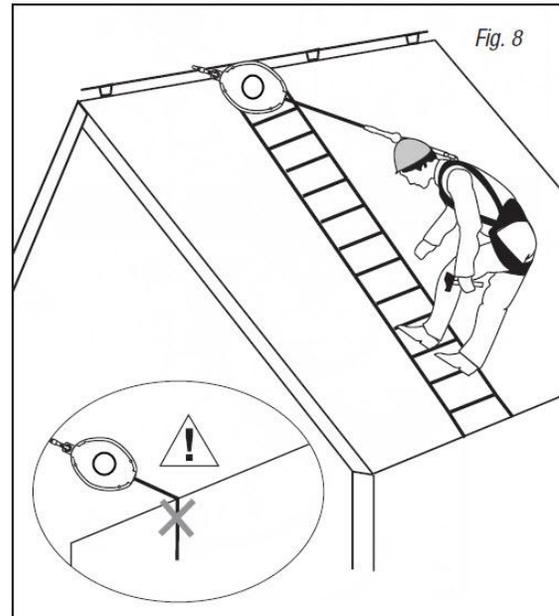


WARNING The user must not exceed an angle of 30° and never move away from the vertical axis of the SRD for more than 10 ft. (3 m) (Figure 7).

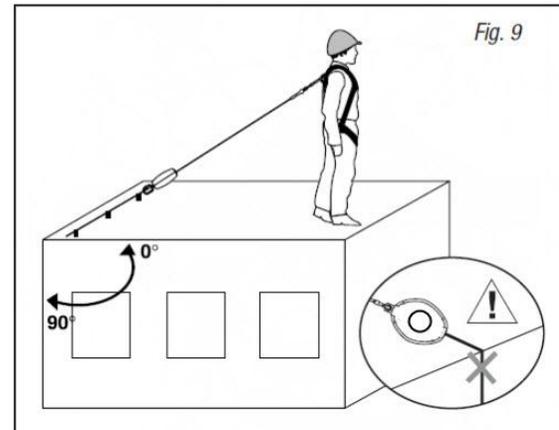


- 7.4.3. If the user is working on an inclined plane, the risk described in the preceding point does not apply. The fall distance will depend on the slope, condition of the surface, etc. (Figure 8).

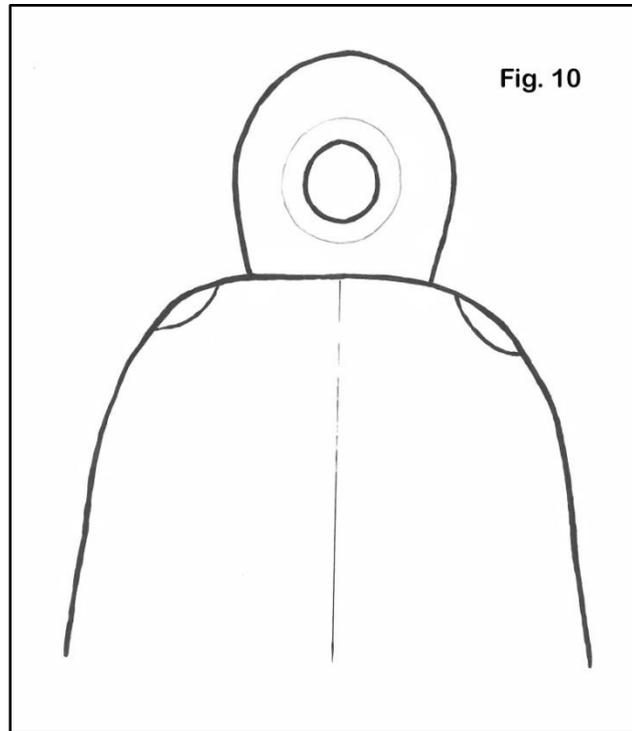
WARNING Care should be taken to avoid contact with all sharp edges which could cut the wire.



- 7.4.4. If the user is working on a sloped area, the length of the SRD must be adapted to the dimensions of the working area (Figure 9).



WARNING For all assembly configurations: The anchoring to the structure must allow self-alignment of the SRD under the effect of the force exerted on the wire rope. Mount the SRD with the carabiner inserted through the built-in swivel at the top of the unit.
(Figure 10).



7.5. Operating environment

The SRD can be used in the following operating environments

- conditions generally found on an outdoor building site;
- in temperatures ranging from -31° F (-35° C) to 176° F (80° C);
- marine environments;
- work that involves spraying products (sandblasting, painting, etc). It is advisable to protect the SRD against contaminants entering the housing.

7.6. Electrical hazards

Take extreme caution when working near or around high voltage power lines: electricity could pass through the SRD or connecting devices resulting in electrocution.

7.7. Rescue operation

A study should have been carried out to define how (in terms of personnel and equipment) an injured person is to be rescued. The rescue should take no more than 15 minutes. Any longer may endanger the safety and health of the person being rescued.

8. OPERATION

- 8.1. The user connects the self-locking swivel eye snap hook to the harness dorsal D-ring and moves at a speed of less than 6.6 ft./sec. (2 m/sec.), which corresponds to normal walking speed. The wire rope unwinds, exerting a light pull on the user. If any slack appears in the wire rope, replace the device immediately.

- 8.2. If there are sudden jerks on the line, the SRD may lock. The user must then move smoothly towards the SRD to unlock it. If the device keeps locking when it should not, replace it.
- 8.3. In the event of a fall, the SRD stops the fall automatically. The user must then be rescued as quickly as possible, within 15 minutes at most.
- 8.4. Once the user has unhooked from the wire, they should hold the end and allow the line to wind back onto the reel. Do not let it freely retract without holding the line. If necessary, use a small tagline when operating retractable lifelines that are positioned out of reach.

*WARNING Do not let go of the wire rope
until it has completely rewound inside the SRD.*

9. LIMITATION OF THE EQUIPMENT

*The limit of one person per SRD and personal fall arrest system
must always be observed.*

- 9.1. Capacity
The SRD has a 310 lbs. (140 kg) rated working capacity. User's weight, clothing and tools may not exceed 310 lbs. (140 kg).
- 9.2. Electrical hazards
Take extreme caution when working near or around high voltage power lines: electricity could pass through the SRD or connecting devices resulting in electrocution.
- 9.3. Explosive atmosphere and chemical products
All internal metal parts are non-sparking. In general, the unit will not be affected by chemicals (acids or bases). For very aggressive environments, consult Safety Direct.
- 9.4. Temperature
Do not use the SRD in places where ambient temperature are lower than -31° F (-35° C) and higher than 176° F (80° C).
- 9.5. Impact
Any SRD subjected to arresting a fall shall be removed immediately from service. It must be inspected and recertified by a qualified person from Safety Direct or by a dealer authorized by Safety Direct to carry out such service.
- 9.6. Moving machinery
Exercise extreme caution when working near or around moving machinery.
- 9.7. Sharp edges/abrasive surfaces
Keep the lifeline away from sharp edges or abrasive surfaces. If this cannot be totally avoided, protect the wire rope of the SRD accordingly.
- 9.8. Life
Every SRD that shows signs of wear, damage or degradation must be removed from service and sent back to Safety Direct or its authorized dealer in order to be inspected and recertified by a qualified person.

10. INSPECTION

The Canadian Standards Association (CSA) Z259.2.2-98 requires inspection, maintenance and recertification annually, regardless of usage.

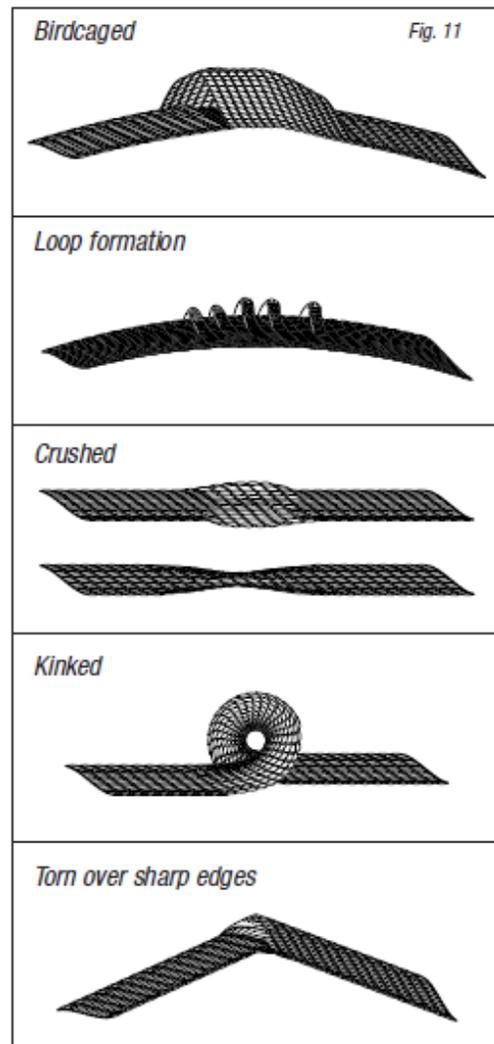
- 10.1. All equipment must be inspected visually before each use and periodically by a qualified person. If damage is found as described below, immediately remove the item from service and replace it. If any damage or questionable conditions are apparent that are not described below, immediately remove the item from service, replace it and contact Safety Direct for advice.
- 10.2. Failure to remove equipment from service that has been damaged or is in questionable condition could lead to serious or fatal injury. A detailed record of inspections should be maintained with the date, inspectors name and signature, the pass or fail status, and corrective action for failed items.
- 10.3. Next Service Due Date
Canadian Standards Association (CSA) requires inspection, maintenance and recertification annually regardless of usage. Before operating the SRD, read the Next Service Due date on the label. If the date has passed, do not use the SRD and send it back to Safety Direct or to an authorized dealer.

- 10.4. Wire rope
Extend the complete length of the wire and examine it in order to spot damage.

Wire rope should be free of birdcage or loop formation, it must not be crushed, kink, cut, torn from sharp edges, etc. (Figure 11).

It should also be free of any loose materials such as dirt, sand, petroleum, chemical contaminants or any other foreign matter.

A change in the original diameter of the rope is an indicator of a weakened area from extreme load.



10.5. Self Retracting Device

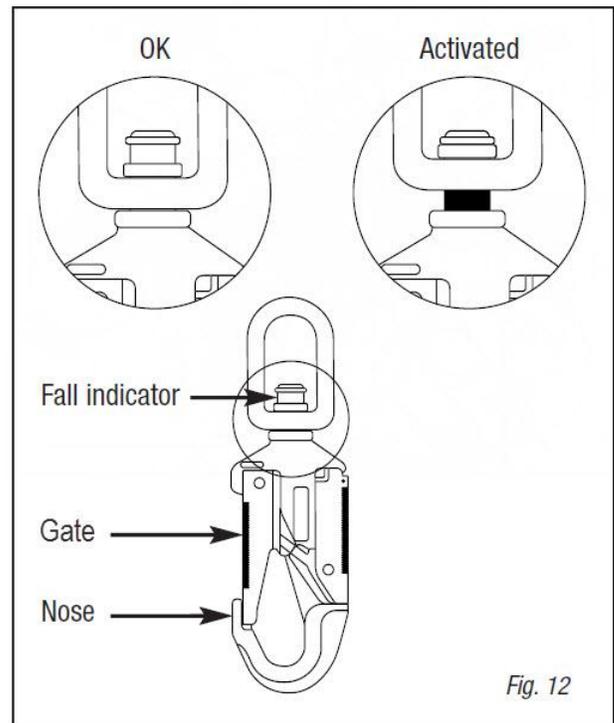
Pull the end of the wire rope sharply in order to make sure it locks. The SRD will stop the retraction of the wire rope as soon as the activation speed is reached. All equipment that shows any sign of distortion or corrosion must be immediately removed from service.

WARNING Bolts or rivets that are discolored, pitted or cracked indicate chemical corrosion. All equipment where the casing has marks of impact or distortion must be removed from service and sent back to Safety Direct Ltd or to an authorized dealer.

10.6. Load Indicating Swivel Snap Hook

The self-locking snap hook is specially designed so that should a fall occur, the indicator will activate, causing the swivel axle to drop and create a gap between the swivel component and the hook body (Figure 12).

Always ensure that the indicator has not been activated before using the SRD. All parts of the self-locking snap hook should be free of distortion. The gate should be seated into the nose without binding and should not be distorted or obstructed. The gate spring should exert enough force to firmly close the gate. The gate lock must prevent the gate from opening when closed.



10.7. Anchorage connector

All parts of the carabiner should be free of distortion. The gate spring should exert enough force to firmly close the gate. Special attention must be paid to the mechanism, which should close adequately. The safety bar of the auto-locking carabiner must complete its rotation when closed.

10.8. Other components

Refer to appropriate inspection instructions.

WARNING: Any equipment that fails to meet the above inspection requirements shall be removed from service. Only Safety Direct or persons or legal entities authorized in writing by Safety Direct, shall make repairs to Safety Direct fall arrest equipment.

10.9. Inspection Table

Type of Use	Infrequent to Light	Moderate to Heavy	Severe
Application	Rescue Confined spaces Factory maintenance	Residential construction Transportation and Utilities Warehouse	Commercial construction Oil and Gas Mining
Storage conditions	Good	Fair	Harsh
Environment	Clean Room temperature	Clean or Dusty All temperatures	Dirty All Temperatures
Inspection by the end user	Before every use	Before every use	Before every use
Inspection by a qualified person	Annually	Semi-annually to Annually	Quarterly to Semi-annually
Factory authorized inspection	1 year	1 year	1 year

11. LABELLING

11.1. Read all the labels on the SRD. They must always be intact and easy to read.

11.2. Front label contains:

- Manufacturers name
- Model number
- Length
- Product type
- CSA/ANSI/OSHA standards
- Next Service Due date
- Materials
- Warnings

11.3. The back label contains

- Maximum arresting force
- Maximum arresting distance
- Usage icons

11.4. The serial number is stamped into the housing

Figure 13



12. TROUBLESHOOTING

12.1. Rewinding problem

If the wire rope does not rewind correctly into the casing, pull it until fully extended and examine its condition (see section 10.4). Let it rewind by itself while under tension, do not let go. If the problem remains, this could indicate that the inside spring may be clogged or corroded, or that the casing may have been distorted. In that case, do not use the SRD and send it back to Safety Direct or to an authorized dealer for servicing by a qualified person.

If a section of the wire rope does not rewind in the SRD, check the indicator on the swivel eye snap hook; it may have been involved in stopping a fall. The SRD must be immediately removed from service and sent back to Safety Direct or to an authorized dealer for servicing.

12.2. Unwinding problem

If the wire rope does not unwind normally or if it moves along in jerks, pull the complete length of the wire rope by hand and examine its condition (see section 10.4). Let the line retract without letting it go. If the problem has not disappeared, send the SRD back to Safety Direct or to an authorized dealer for servicing.

12.3. Jammed SRD

If the wire rope does not move at all, do not use the SRD. Send it back to Safety Direct or to an authorized dealer for servicing.

13. MAINTENANCE AND STORAGE

13.1. Failure to maintain and store equipment carefully can result in damage and malfunction that could lead to a serious or fatal injury. The good condition of the wire rope and of the SRD is critical for safe use.

13.2. Maintenance and cleaning

Unwind the complete length of the wire rope, clean it and lubricate it with a cloth lightly soaked in oil. Let it rewind but do not let it go. Clean the outer side of the SRD with a damp cloth.

WARNING: Do not use products such as solvents on the SRD.

13.3. Storage

When the SRD is not in use, it must be kept in a dry environment and sheltered from weather. When stored, the wire rope must be totally coiled in the SRD casing.

14. WARRANTY INFORMATION

WARNING: Under no condition whatsoever, no other person, means or legal entity is ever allowed to replace the swivel snap hook other than Safety Direct or authorized dealer.

14.1. Safety Direct warrants its equipment to be free from defects in material and workmanship under normal use and service.

14.2. Safety Direct's obligation under this warranty is limited to repairing or replacing, at our option, any part of the unit, which proves under examination to our satisfaction, to be defective in material or workmanship. The item in question is to be returned to Safety Direct upon authorization of the dis-

tributor, transportation prepaid, within twelve (12) months from the date the equipment was sold to the original purchaser. Return shipment must be prepaid.

- 14.3. Any parts proven to be defective upon inspection by Safety Direct will be repaired or replaced at no cost.
- 14.4. The obligation under this warranty does not include labour or transportation costs or ensuing damages of any kind.
- 14.5. Any defect in this equipment must immediately be brought to the attention of Safety Direct. The distributor will make arrangements with the factory for repairs or replacements of the parts within the terms of this warranty.
- 14.6. Safety Direct's obligation is restricted to replacing parts and does not include the complete unit. The warranty is void on any unit that has been: modified or tampered with; repaired by persons other than a factory representative or an authorized Safety Direct distributor; repaired with other than Safety Direct standard parts; or damaged by reasons of accident, alteration, misuse or abuse.
- 14.7. This warranty is in lieu of all other warranties, expressed or implied. We do not authorize any person or representative to make any other guarantee or to assume for us any liability in connection with the sale of our appliances other than those contained herein. Any agreement outside of or contradictory to the foregoing shall be void and of no effect.

This booklet is neither a regulations compliance guide nor a general training guide for fall arrest systems. You must refer to instructions delivered by manufacturers of the pieces of equipment included in your system. Whenever calculations and specific installations are required, the worker should be professionally trained to that end and should secure relevant information prior to commencing such work.

Safety Direct Ltd. reserves the right to modify the specifications of the equipment described in this manual.