

USER INSTRUCTIONS ROSE LANYARD

⚠ WARNING

National standards and state, provincial and federal laws require the user to be trained before using this product. Use this manual as part of a user safety training program that is appropriate for the user's occupation. These instructions must be provided to users before use of the product and retained for ready reference by the user. The user must read, understand (or have explained), and heed all instructions, labels, markings and warnings supplied with this product and with those products intended for use in association with it. **FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

1.0 LANYARD MODELS AND SPECIFICATIONS

TABLE 1. ROSE LANYARD MODELS COVERED BY THESE INSTRUCTIONS

MODEL NUMBER		LANYARD MATERIAL	DESCRIPTION		HARDWARE	LENGTH (a)	APPROXIMATE WEIGHT	
Nylon	Polyester		IN	MM			LBS	KG
Group I. For Models in this section, refer to note (c)								
505149	505237	ROPE	5/8 Dia.	16	HL2000	ADJUST.	2.0	0.9
505166	505240	ROPE	5/8 Dia.	16	HL2000	FIXED	1.9	0.9
(b)505202	(b)505238	ROPE	5/8 Dia.	16	RL20	ADJUST.	2.1	1.0
(b)505203	(b)505241	ROPE	5/8 Dia.	16	RL20	FIXED	2.0	0.9
505088	505251	STRAP	1 Wide	25	HL2000	ADJUST.	1.7	0.8
505097	505255	STRAP	1 Wide	25	HL2000	FIXED	1.5	0.7
(b)505204	505209	STRAP	1 Wide	25	RL20	ADJUST.	1.7	0.8
(b)505197	(b)505210	STRAP	1 Wide	25	RL20	FIXED	1.7	0.8
505063		WIRE ROPE	7/32 Dia.	5.6	HL2000	FIXED	1.8	0.8
505205		WIRE ROPE	7/32 Dia.	5.6	RL20	FIXED	1.9	0.9
Group II. For Models in this section, refer to note (d)								
505269	505243	ROPE	5/8 Dia.	16	HL2000 / Thimble	FIXED	1.6	0.7
505270	505244	ROPE	5/8 Dia.	16	RL20 / Thimble	FIXED	1.7	0.8
505165	505256	STRAP	1 Wide	25	HL2000 / Sewn Loop	FIXED	1.0	0.4
505086	505253	STRAP	1 Wide	25	HL2000 / Sewn Loop	ADJUST.	1.1	0.5
(b)505194	(b)505211	STRAP	1 Wide	25	RL20 / Sewn Loop	FIXED	1.1	0.5
(b)505217	(b)505254	STRAP	1 Wide	25	RL20 / Sewn Loop	ADJUST.	1.2	0.5
505319		WIRE ROPE	7/32 Dia.	5.6	HL2000 / Thimble	FIXED	1.4	0.6
505320		WIRE ROPE	7/32 Dia.	5.6	RL20 / Thimble	FIXED	1.5	0.7

NOTES TO TABLE 1:

- (a) Fixed-length lanyards are 6.0 ft (1.8 m). Adjustable length lanyards adjust from 4.0 ft (1.2 m) to 6.0 ft (1.8 m).
- (b) Noted items are listed by CSA in accordance with CSA Z259.1.
- (c) For use as a component in a lanyard connecting subsystem, combine with Rose Dyna Brake® shock absorber of the same material, Models 503038 (nylon, RL20), 503041 (nylon, HL2000), 503039 (polyester, RL20), or 503042 (polyester, HL2000). See note (e).
- (d) For use as a component in a lanyard connecting subsystem, combine with Rose carabiner, Model 506259 (aluminum) or 506572 (steel), and a Rose Dyna Brake shock absorber, Models 503043 (nylon, RL20), 503045 (nylon, HL2000), 503044 (polyester, RL20), or 503046 (polyester, HL2000) in the same material as the lanyard. See note (e).
- (e) See sections 5 and 6 for a discussion of lanyard connecting subsystems and their distinctly different function and use (for fall arrest) from that of lanyards (for restraint). A lanyard alone (without a shock absorber) must not be used for fall arrest.

1.1 SPECIFICATIONS - ROSE LANYARDS

- Rose lanyards listed in Table 1 meet ANSI Z359.1 sections 3.2.3.1 through 3.2.3.5 and 3.2.3.7 and may be used as components of a lanyard connecting subsystem for fall arrest, provided they are used in conjunction with an energy (shock) absorber component that meets the requirements of ANSI Z359.1.
- Rose lanyards listed in Table 1 meet ANSI A10.14 and applicable OSHA regulations for positioning (restraint) applications. Those designated by note (b) are also listed by CSA in accordance with CSA Z259.1.
- See sections 5.1, 6.1.1.1 and 6.1.3 of these instructions for guidance on the permissible uses of lanyards identified in Table 1.
- These instructions, and markings borne by the products, fulfill the instruction and marking requirements of the above referenced standards and regulations.
- Snaphooks and D-rings are zinc plated, forged alloy steel and 100% proof tested to 3,600 lbf (16 kN). Snaphooks and D-rings are sample proof tested to 4,000 lbf (17.8 kN) in accordance with CSA Z259.1. Minimum breaking strength is 5,000 lbf (22.2 kN).
- Adjusters are forged alloy steel and zinc plated. Minimum breaking strength is 4,000 lbf (17.8 kN).
- Lanyards listed in Table 1 have a minimum breaking strength of 5,000 lbf (22.2 kN). Materials used in construction have a minimum breaking strength of 8500 lbf (37.7 kN) and may be one of three types: 1) strap webbing is nylon or polyester, 1 in (25 mm) nominal width; 2) rope is nylon or polyester, 5/8 in (16 mm) nominal diameter, and; 3) wire rope is 7/32 in (5.6 mm) nominal diameter with vinyl coating.
- Webbing is color dyed for identification. Nylon lanyards are yellow and polyester lanyards are orange.
- Free fall distance (limit) when using the lanyard with a shock absorber, must not exceed 6 ft (1.8 m) in accordance with OSHA and ANSI Z359.1. The Canadian Occupational Health and Safety Act (1990) and ANSI A10.14 specify that free fall distance must not exceed 5 ft (1.5 m). The user must comply with applicable standards and regulations.
- Free fall distance (limit) when using the lanyard without a shock absorber should be reduced to as close to zero as possible. OSHA and ANSI A10.14 (Type II) specify a maximum of 2 ft (0.6 m). The manufacturer recommends that a goal of zero free fall distance be implemented to reduce the possibility of injury when using Rose lanyards in a personal fall restraint system.
- When used as part of a personal fall arrest system, fall arresting forces permitted by the shock absorber must not exceed 900 lbf (4.0 kN).
- Capacity is 310 lb (140 kg) including weight of the user plus clothing, tools and other user-borne objects.

CAUTION

The lanyards listed in Table 1 may be used in a personal fall arrest system when, and only when, they are used in conjunction with an energy (shock) absorber component meeting the requirements of ANSI Z359.1.

2.0 TRAINING

It is the responsibility of the purchaser of the Rose lanyard to assure that product users are made familiar with these User Instructions and trained by a competent person in: (1) workplace hazard awareness and hazard identification, evaluation and control; (2) how to properly select, inspect, use, store and maintain the lanyard; (3) how to determine and acceptably limit free fall distance and total fall distance; (4) how to select and make connections to anchorages and anchorage connectors; (5) proper attachment locations on the user's body support and other components of work positioning and travel restriction systems, and proper attachment methods including compatibility of connections to reduce the probability of accidental disengagement (rollout); (6) how to evacuate from a hazardous space; (7) what to do after a fall to protect the user from injury, including emergency rescue planning and execution; and (8) the consequences of improper use of the lanyard and associated equipment and of failure to follow instructions and training. If the lanyard is to be used for confined space applications, the user must also be trained in accordance with the requirements of OSHA regulation 29 CFR 1910.146 and ANSI Z117.1. Training must be conducted without undue exposure of the trainee to hazards. The effectiveness of training should be periodically assessed (at least annually) and the need for more training or retraining determined. Rose Manufacturing Company offers training programs. Contact Rose for training information.

3.0 HAZARDS IDENTIFICATION, EVALUATION AND CONTROL

CAUTION

Do not use the Rose lanyard unless a qualified person has inspected the workplace and determined that identified hazards can neither be eliminated nor exposures to them prevented.

Prior to selecting a lanyard or other personal protective equipment, the user must make a workplace assessment of hazards and conditions where the equipment is required. Such assessment must, at a minimum, identify the presence of:

- | | | | |
|---------------|--------------------|---------------------|----------------------------|
| • Hot objects | • Chemicals | • Abrasive surfaces | • Climatic factors |
| • Sparks | • Electric hazards | • Moving equipment | • Weather factors |
| • Flames | • Sharp objects | • Moving materials | • Unstable/uneven surfaces |

- Heat-producing operations
- Environmental contaminants
- Unguarded openings
- Slippery surfaces
- Confined space hazards

Foreseeable changes in any of these conditions, taken individually or collectively, must be identified, evaluated, and controlled. The materials and construction of the lanyard and associated equipment must be considered in the selection process such that these workplace conditions are suitably addressed and responded to. The equipment must match the work situation and workplace environmental factors.

The workplace assessment must identify all paths of user movement and all hazards along such paths. Where possible, exposure to identified fall hazards should be prevented by means of work restraint systems. The lanyard may be used to stabilize the user (horizontally and vertically) in the work environment when configured in a work positioning system. A work positioning system should always be backed up by a fall arrest system. The lanyard may also be employed to restrict the user's mobility in a travel restraint system to prevent entry into a hazard zone.

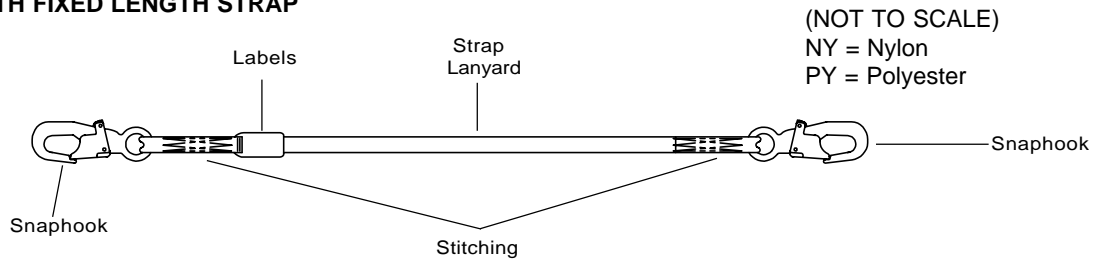
When all means of preventing a fall have been exhausted, then a personal fall arrest system may be selected for controlling unavoidable fall hazards. The user must identify the required range of mobility in each hazard zone and note the location and distance to all obstructions in potential fall paths. Lateral obstructions which could be contacted in a pendular fall arrest must be noted. The lanyard (termed a "lanyard connecting subsystem" in ANSI Z359.1) connecting the user's harness to an anchorage must be selected so as to satisfactorily limit total fall distance and allow for dynamic elongation of the assembly. If the lanyard is to be used for confined space entry operations, the workplace assessment must comply with the requirements of OSHA regulations 29 CFR 1910.146 and ANSI Z117.1.

4.0 DESCRIPTION OF ROSE LANYARDS

4.1 CONFIGURATIONS OF LANYARDS: The configurations shown below are not to scale and are shown with RL20 self-locking snaphooks. HL2000 self-locking snaphooks (not shown) are connected to the products in the same manner. Lanyard straps and ropes may be either nylon or polyester. See Table 1. The intended purpose of each lanyard element is given in sections 4.2 through 4.6.

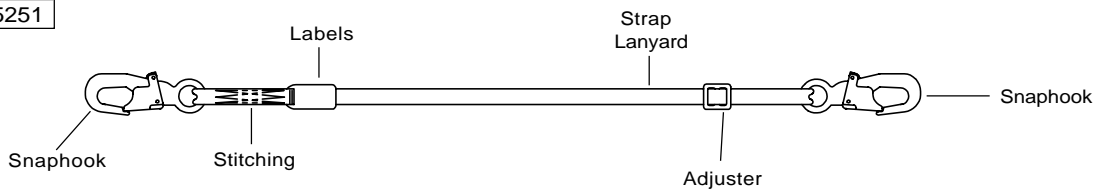
4.1.1 LANYARD WITH FIXED LENGTH STRAP

MODELS:		
	RL20	HL2000
NY	505197	505097
PY	505210	505255



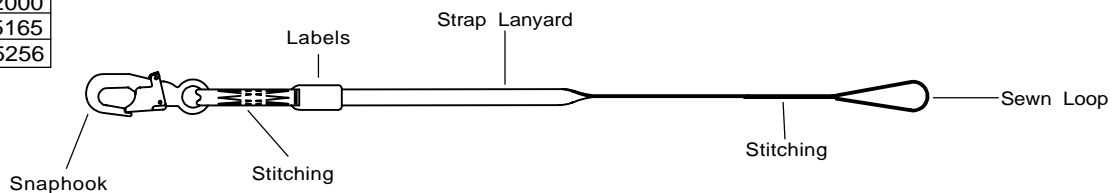
4.1.2 LANYARD WITH ADJUSTABLE LENGTH STRAP

MODELS:		
	RL20	HL2000
NY	505204	505088
PY	505209	505251



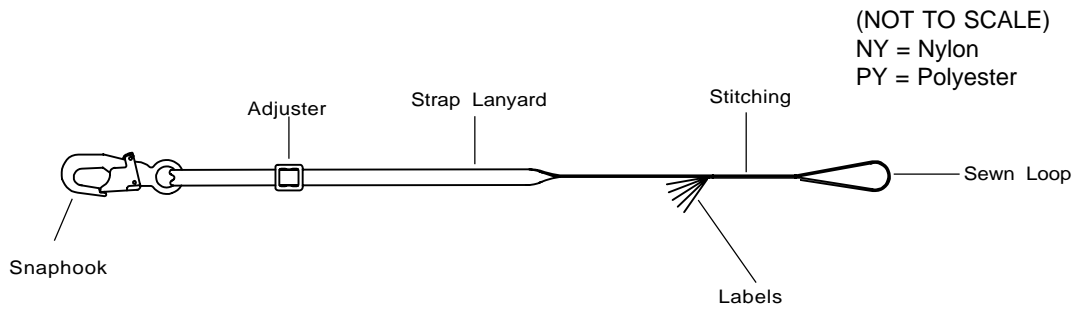
4.1.3 LANYARD WITH SEWN LOOP, FIXED LENGTH STRAP

MODELS:		
	RL20	HL2000
NY	505194	505165
PY	505211	505256



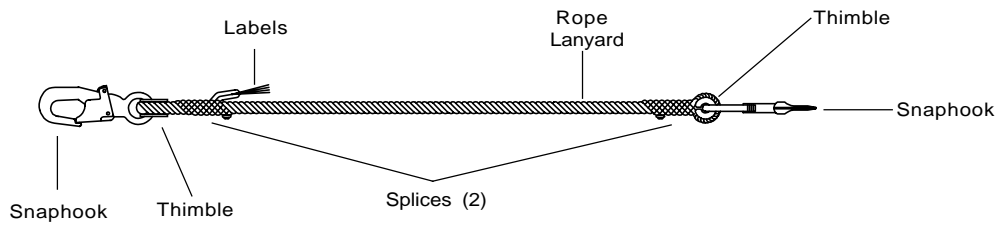
4.1.4 LANYARD WITH SEWN LOOP, ADJUSTABLE LENGTH STRAP

MODELS:		
	RL20	HL2000
NY	505217	505086
PY	505254	505253



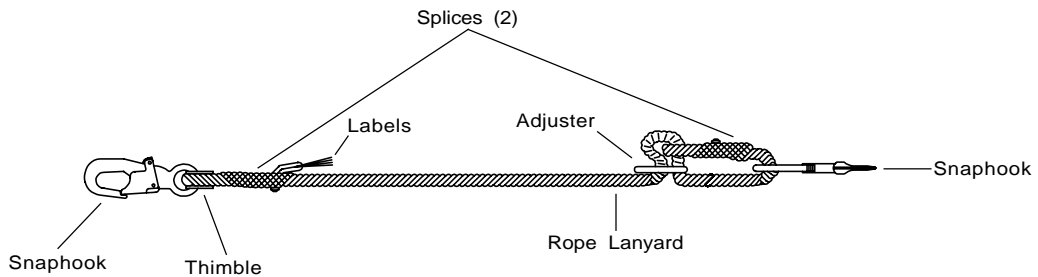
4.1.5 LANYARD WITH FIXED LENGTH ROPE

MODELS:		
	RL20	HL2000
NY	505203	505166
PY	505241	505240



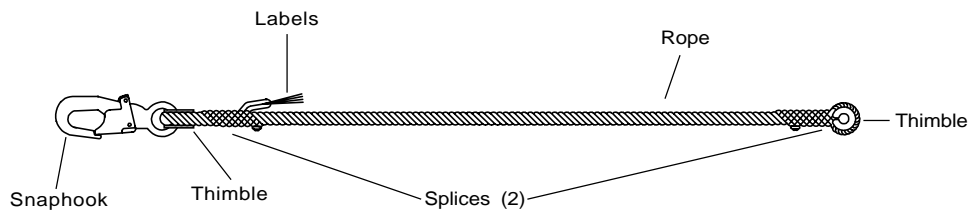
4.1.6 LANYARD WITH ADJUSTABLE LENGTH ROPE

MODELS:		
	RL20	HL2000
NY	505202	505149
PY	505238	505237



4.1.7 LANYARD WITH SPLICED THIMBLE EYE, FIXED LENGTH ROPE

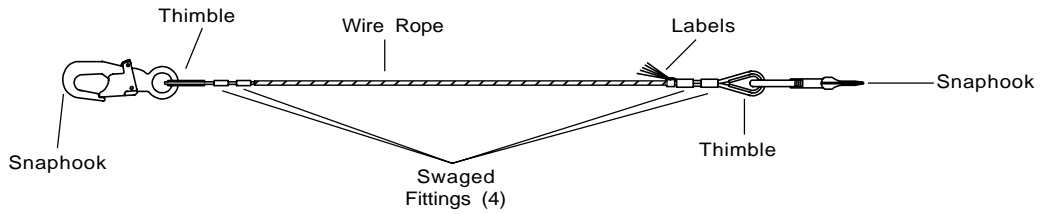
MODELS:		
	RL20	HL2000
NY	505270	505269
PY	505244	505243



4.1.8 LANYARD WITH FIXED LENGTH WIRE ROPE

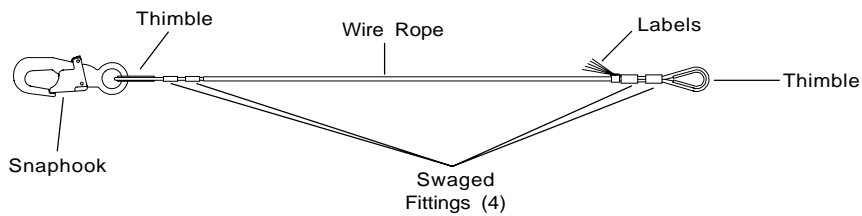
(NOT TO SCALE)
WR = Wire rope

MODELS:		
	RL20	HL2000
WR	505205	505063



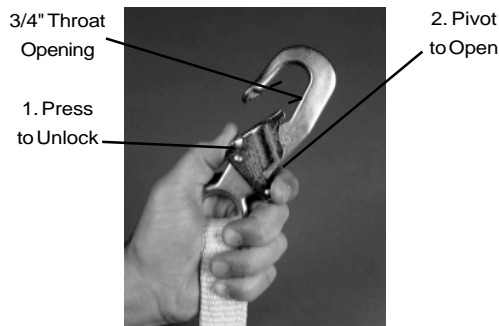
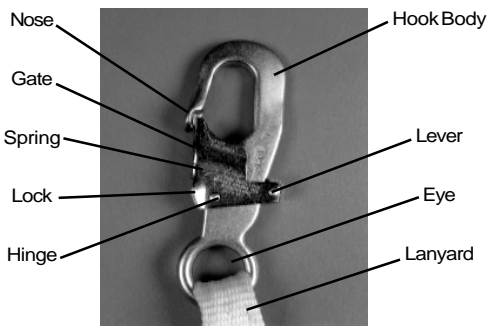
4.1.9 LANYARD WITH SWAGED METAL THIMBLE, FIXED LENGTH WIRE ROPE

MODELS:		
	RL20	HL2000
WR	505320	505319



4.2 **SNAPHOOKS:** Rose offers two self-locking snaphook models: the RL20 and the HL2000. Each possesses a locking feature which requires a separate and distinct hand motion to disengage the lock before the gate will open. Rose snaphooks are operable with one hand and should automatically close and lock when released. **Always check to see that the gate closes and locks** before use and after coupling to other compatible connectors (e.g., D-rings).

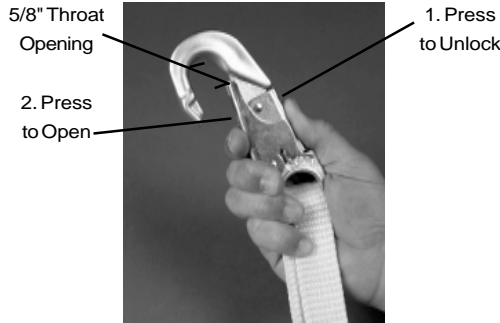
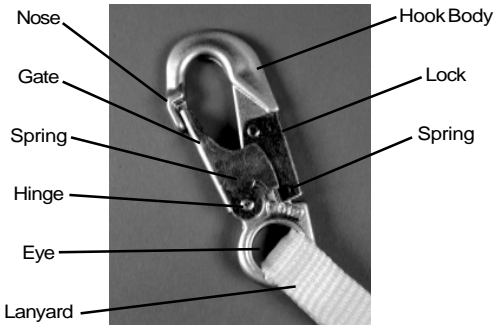
4.2.1 RL20 SELF-LOCKING SNAPHOOK



Release lock and gate to allow gate to close and lock.
ALWAYS CHECK.

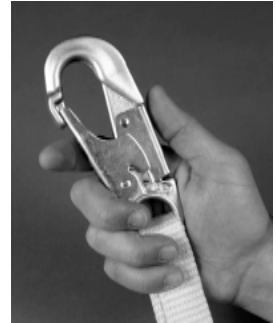


Snaphook
(connect to anchorage connector)

4.2.2 HL2000 SELF-LOCKING SNAPHOOK

Release lock and gate to allow gate to close and lock.

ALWAYS CHECK.



Snaphook
(connect to anchorage connector)

⚠ CAUTION

Be sure dimensions, shape and pressure of connected and nearby objects cannot unlock or open snap gate.

- 4.3 ADJUSTER:** The adjuster on the lanyard (when present) is for adjusting the overall length of the lanyard.
- 4.4 LANYARD LINE:** The lanyard line (strap webbing, synthetic rope, vinyl-coated wire rope) extends between and joins the snaphooks. In work positioning system applications the lanyard is secured around a suitable anchorage. See section 7.5. In travel restriction system applications, the lanyard length defines the permissible distance of travel between the anchorage point and the user's body support. See section 7.6. In fall arrest system applications, the lanyard element links the anchorage or anchorage connector to the shock absorber and the user's body support. See sections 6.2.3.1, 6.2.3.2 and 7.2.
- 4.5 LANYARD LOOP:** The loop is sewn on one end of travel restriction lanyards to permit attachment of the lanyard to a travel restriction anchorage such as a beam or column (refer to section 7.6). In fall arrest system applications the loop may be connected by means of a Rose carabiner to a Rose Dyna Brake shock absorber to form a lanyard connecting sub-system. See section 6.2.3.2.
- 4.6 THIMBLE EYE:** The thimble eye is the attachment element for a Rose carabiner. In work positioning system applications, the thimble eye with carabiner may be connected to the hip D-ring of the user's body belt or full body harness. In travel restriction applications, the thimble eye with carabiner may be secured either to an anchorage or anchorage connector, or to a compatible D-ring on the user's body support. In fall arrest system applications, the thimble eye with carabiner is connected to the Rose Dyna Brake shock absorber. See section 6.2.3.2.

5.0 LANYARD SELECTION AND APPLICATIONS

- 5.1 PURPOSE OF ROSE LANYARD:** The role of the Rose lanyard depends on the system of which it is a part. There are two systems which include the Rose lanyard as a component:
- 5.1.1 FALL ARREST:** The lanyard may be incorporated as the lanyard component in a non-integral lanyard connecting sub-system for use in fall arrest systems. Refer to section 6.1.1 for the requirements of a complete fall arrest system.
- 5.1.2 RESTRAINT:** The lanyard may be incorporated as the lanyard component in a personal restraint system for either work positioning or travel restriction. Refer to section 6.1.3 for the requirements of complete restraint systems.
- 5.1.3 USE OF THE LANYARD:** Use of the lanyard must comply with these User Instructions and, further, is subject to approval under the user's safety rules and regulations and by the user's safety director, supervisor, or a qualified safety engineer. Be certain the selection of the lanyard is suited for the intended use and work environment. If there is any conflict between these User Instructions and other directives or procedures of the user's organization, do not use the lanyard until such conflicts are resolved. Consult all local, state, and federal Occupational Health and Safety Administration (OSHA) requirements for personal safety equipment. Also refer to the latest revision of ANSI A10.14 standard for more information on full body harnesses, body belts and associated system components. In Canada, refer to provincial and federal regulations and to CSA Z259.1.

- 5.2 SIZING (LENGTH) OF LANYARDS:** The overall length of rope and strap lanyard is 6 ft (1.8 m) or adjustable from 4 ft (1.2 m) to 6 ft (1.8 m). Wire rope lanyards are 5 ft (1.5 m). Other lengths of Rose lanyards in all material types are available for specific applications, contact the factory for details. The lanyard length should be kept to a minimum that is practical for the work at hand.
- 5.3 USAGE LIMITATIONS:** The following applications limitations must be considered and planned for before using the lanyard.
- 5.3.1 PHYSICAL LIMITATIONS:** The lanyard is designed for use by one person with a combined total weight of no more than 310 lbs (140 kg), including clothing, tools, and other user-borne objects. Persons with muscular, skeletal, or other physical disorders should consult a physician before using. Pregnant women and minors must never use the lanyard. Increasing age and lowered physical fitness may reduce a person's ability to withstand shock loads during fall arrest or prolonged suspension. Consult a physician if there is any question about physical ability to safely use this product to arrest a fall or suspend.
- 5.3.2 CHEMICAL HAZARDS:** Acidic, alkaline, or other environments with harsh substances may damage the webbing and hardware elements of the lanyard. Nylon is more resistant to attack by alkaline environments. Polyester is more resistant to attack by acids. If working in a chemically aggressive environment, consult Rose Manufacturing Company to determine which lanyard material is better for your specific conditions. When working in the presence of chemicals, more frequent inspection of the lanyard is required.
- 5.3.3 HEAT:** Do not use synthetic fibre (nylon, polyester) lanyards in environments with temperatures greater than 185° F (85° C). Protect the product when used near welding, metal cutting, or other heat producing activities. Sparks and welding slag will damage the product and reduce its strength. Wire rope lanyards may be used in environments where point-source temperatures do not exceed 370° F (188° C). At these temperatures, damage will occur to the vinyl coating but strength of the wire rope will be minimally affected on a one-time use basis. Prolonged or repeated exposure to high temperatures should be avoided. Refer to sections 11 and 12 for inspection details.
- 5.3.4 CORROSION:** Do not expose the lanyard to corrosive environments for prolonged periods. Organic substances and salt water are particularly corrosive to metal parts. When working in corrosive environments, more frequent inspection, cleaning and drying of the lanyard is required. See sections 9, 11 and 12 for cleaning and inspection details.
- 5.3.5 ELECTRICAL HAZARDS:** Use extreme caution when working near energized electrical sources. Metal hardware on the lanyard and on other components connected to it will conduct electric current. Maintain a safe working distance (preferably at least 10 feet (3 m)) from electrical hazards. Never use a wire rope lanyard near electrical hazards.
- 5.3.6 MOVING MACHINERY:** When working near moving machinery parts (e.g. conveyors, rotating shafts, presses, etc.), maintain a safe working distance from machinery which could entangle clothing, this product, or other components connected to it.
- 5.3.7 SHARP EDGES AND ABRASIVE SURFACES:** Do not expose the lanyard to sharp edges or abrasive surfaces that could cut, tear or abrade and weaken the fibers. When work around sharp edges and abrasive surfaces is unavoidable, use heavy padding or other protective barriers to prevent direct contact.
- 5.3.8 WEAR AND DETERIORATION:** Any lanyard which shows signs of excessive wear, deterioration or aging must be removed from use and marked "UNUSABLE" until destroyed. See sections 11 and 12 for detailed inspection procedures.
- 5.3.9 IMPACT FORCES:** Any lanyard which has been subjected to the forces of arresting a fall must be immediately removed from service and marked as "UNUSABLE" until destroyed.

6.0 SYSTEMS REQUIREMENTS

The lanyard is one component of multi-component systems. Without the other necessary components, the lanyard serves no useful purpose. There are several different types of systems for use at heights and in confined spaces.

- 6.1 SYSTEM TYPES:** Systems are classified according to their intended purposes. There are six classifications of systems which may be used individually or in some combinations. The six basic systems classifications are:

- Fall Arrest
- Climbing Protection
- Restraint
- Personnel-riding
- Rescue
- Evacuation

- 6.1.1 FALL ARREST SYSTEMS:** A fall arrest system is an assembly of components and subsystems, including the necessary connectors, used to arrest the user in a fall from a working height and suspend the user until rescue can be effected. A fall arrest system must always include a full body harness (such as the Rose Pullover harness) and connecting means between

the harness and an anchorage or anchorage connector. Such connecting means may consist of a lanyard, energy (shock) absorber, fall arrester (rope grab), lifeline, self-retracting lanyard or suitable combinations of these. **The lanyards described by these instructions are not intended for use in fall arrest systems unless used in conjunction with a shock absorber.** See sections 6.2.3.1 and 6.2.3.2.

- 6.1.1.1 Lanyard Connecting Subsystem** is the term applied to an assembly, including the necessary connectors, which is comprised of a lanyard and a shock absorber. The lanyard and shock absorber are usually permanently coupled together along with self-locking snaphooks at each end. The subsystem is attached between the fall arrest attachment (back D-ring) of the user's harness and an anchorage or anchorage connector. **The lanyards described by these instructions may be connected to a Rose Dyna Brake shock absorber to form a lanyard connecting subsystem.** See sections 6.2.3.1 and 6.2.3.2.
- 6.1.1.2 Fall Arrester Connecting Subsystem** is the term applied to an assembly, including the necessary connectors, which is comprised of a fall arrester (rope grab) and a vertical lifeline. Sometimes a lanyard or lanyard with integral shock absorber, including the necessary connectors, is connected to the rope grab. The vertical lifeline must have a lifeline tensioner (counterweight), a connector for anchoring it, and may have a shock absorber. The subsystem is attached between the fall arrest attachment (back D-ring) of the harness and an anchorage or anchorage connector. Fall arrester connecting subsystems are sometimes suitable for use in climbing protection systems. See section 6.1.2. Lanyard connecting subsystems used with fall arresters should have a maximum length of 3 ft (0.9 m). **Due to their lengths and other factors, the lanyards identified in Table 1 are generally not suited for use in fall arrester connecting subsystems.** Contact Rose for information on lanyards that are suitable for use in fall arrester connecting subsystems.
- 6.1.1.3 Self-Retracting Lanyard Connecting Subsystem** is the term applied to an assembly, including the necessary connectors, comprised of a self-retracting lanyard only or a self-retracting lanyard and added shock absorber at the point of attachment to the user's harness. The Rose Dyna-Lock® and Dynevac® are self-retracting lanyard connecting subsystems. The subsystem is attached between the fall arrest attachment (back D-ring) of the harness and an anchorage or anchorage connector. These subsystems are sometimes suitable for use in climbing protection systems. See section 6.1.2. **The lanyards described by these instructions are not suited for use in self-retracting lanyard connecting subsystems.**
- 6.1.2 CLIMBING PROTECTION SYSTEMS:** A climbing protection system is an assembly of components and subsystems, including the necessary connectors, used to arrest the user in a fall from a working height and suspend the user until rescue can be effected. Such systems are used for climbing ladders and structures that are designed for climbing. They may either be temporary (portable) or permanent. Temporary climbing protection systems are described in sections 6.1.1.2 and 6.1.1.3. Permanent climbing protection systems are ones of the rigid rail type such as the Rose Dyna-Glide™ system. In those systems, a rigid rail is permanently attached to a fixed ladder or the structure to be climbed. A fall arrester device is attached to and glides on the rail to permit ascent and descent. It quickly locks in case of a fall. The Dyna-Glide fall arrester is attached between the front attachment (chest D-ring) of the Rose Pullover harness and the fall arrester by use of a carabiner. Contact Rose for more information about Dyna-Glide climbing protection systems. **The lanyards described in these instructions are not suited for use in conjunction with and connected to the fall arrester of a permanent climbing protection system.**
- 6.1.3 RESTRAINT SYSTEMS: The lanyards described in these instructions are intended for use in restraint systems.** A restraint system is an assembly of components and subsystems, including the necessary connectors, used to either:
- (a) stabilize and partially support the user at an elevated work location and allow free use of both hands. This type of restraint system is referred to as a work positioning system or, simply, a positioning system, or
 - (b) restrict the user's motion so as to prevent reaching a location where a fall hazard exists. This type of restraint system is referred to as a travel restriction system.
- A positioning system includes the user's harness and connecting means between the harness and an anchorage or anchorage connector. Such connecting means usually consists of a positioning lanyard which is connected to both hip D-rings of the harness and wraps around or connects to an anchorage or anchorage connector. A positioning system must always be backed up by a fall arrest system. A travel restriction system consists of the user's harness and a fixed length or adjustable length lanyard connected between any one of the harness D-rings and an anchorage or anchorage connector.
- 6.1.4 PERSONNEL-RIDING SYSTEMS:** A personnel-riding system is an assembly of components and subsystems, including the necessary connectors, used for lifting and lowering a worker to and from a work station which is not accessible by other preferred means, and potentially for positioning the worker while at that work station. Personnel-riding systems are of two general types, namely: (a) the mobile supported aerial platform type (e.g. manually- and self-propelled platforms and vehicle-mounted platforms), and (b) suspended personnel hoisting type (e.g. suspended scaffolds, suspension seats, and suspension harnesses). When working on mobile supported aerial platforms, the user should use a restraint system (see section 6.1.3) anchored to the platform to provide restraint against falling from the platform. When working with the suspended personnel hoisting type of system, the user should use a back-up fall arrest system of either the self-retracting lanyard type or the fall

arrester (rope grab) type. Contact Rose for separate instructions on equipment used in personnel riding systems. **The lanyards described in these instructions should not be used for back-up fall arrest when lifting or lowering a person on a personnel-riding system.**

- 6.1.5 RESCUE SYSTEMS:** The lanyards described in these instructions are generally not used in rescue systems. A rescue system is an assembly of components and subsystems, including the necessary connectors, used for moving an incapacitated or isolated person from a hazardous place to a safe place under alert or emergency conditions. An isolated person is one who has no available means of access to a safe place or is physically stranded or trapped. Rescue systems require actions of specially trained rescuers to effect the rescue of the incapacitated or isolated person.
- 6.1.6 EVACUATION SYSTEMS:** The lanyards described in these instructions are generally not used in evacuation systems. An evacuation system is an assembly of components and subsystems, including the necessary connectors, employed by the user to move, unassisted by others, from a hazardous place to a safe place under alert or emergency conditions. An evacuation system consists of the user's harness and connecting means between the harness and an anchorage or anchorage connector. Such connecting means may consist of: (a) the Rose Dynescape™ Automatic Descender, (b) the Rose Dynescape™ Manual Descender, or (c) the Rose Fallbloc™ System. See the separate instructions for this equipment.
- 6.1.7 COMBINATIONS OF SYSTEMS:** Systems for fall arrest, restraint, climbing protection, personnel-riding, rescue and evacuation are often used in various combinations. For example, positioning type restraint systems must be backed up by a separate and independent fall arrest system. Hands-on training is required to obtain the necessary information and skills needed to work with combinations of systems. Refer to the separate instructions accompanying the several components and subsystems necessary to make up these systems.

6.2 COMPATIBILITY OF SYSTEM PARTS

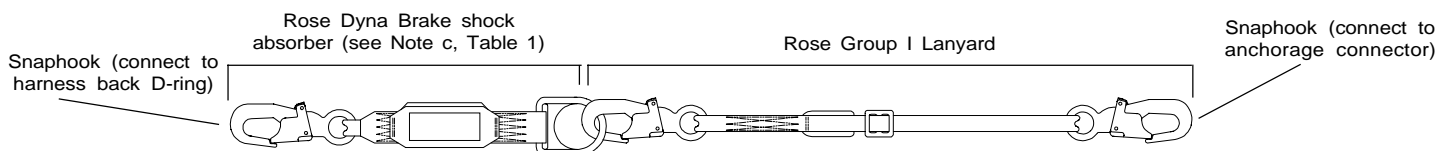
6.2.1 COMPATIBILITY OF COMPONENTS AND SUBSYSTEMS: Rose lanyards are designed to be used with other Rose-approved products. Use of the lanyard with products made by others that are not approved in writing by Rose may adversely affect the functional compatibility between system parts and the safety and reliability of the complete system. Connecting subsystems must be suitable for use in the application (e.g. fall arrest, climbing protection, restraint, rescue or evacuation). Contact Rose Manufacturing Company with any questions regarding compatibility of equipment used with the Rose lanyard.

6.2.1.1 BODY BELTS: The lanyards listed in Table 1 may be combined with a Rose body belt meeting the requirements of ANSI A10.14 when used for restraint. OSHA regulations and ANSI A10.14 permit the use of body belts for personal restraint and fall arrest. Rose recommends the use of either a body belt or full body harness for restraint, and only a full body harness for fall arrest. Although not recommended, if a body belt is used for fall arrest a shock absorber meeting the requirements of ANSI Z359.1 must be used in the system.

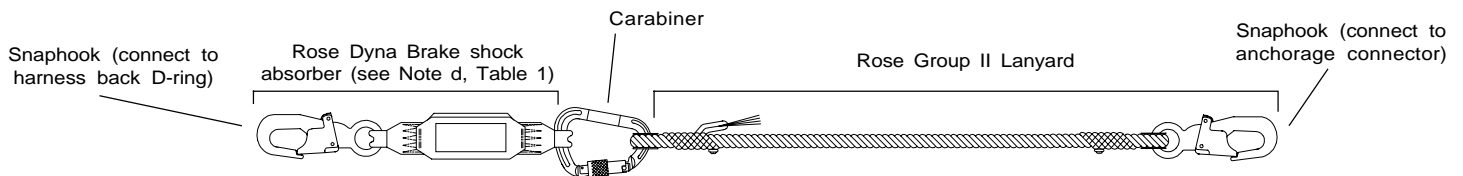
6.2.2 COMPATIBILITY OF CONNECTORS: Connectors, such as D-rings, snaphooks, and carabiners, must be rated at 5,000 lbf (22.2 kN) minimum breaking strength. Rose connectors meet this requirement. Connecting hardware must be compatible in size, shape, and strength. Non-compatible connectors may accidentally disengage ("rollout"). Always verify that the connecting snaphook on the lanyard is compatible with the D-ring on the harness or anchorage connector.

6.2.3 COMPATIBLE COMPONENTS IN A NON-INTEGRAL LANYARD CONNECTING SUBSYSTEM FOR FALL ARREST: A variety of lanyard connecting subsystems can be created using any of the lanyards in Table 1.

6.2.3.1 CREATING A NON-INTEGRAL LANYARD CONNECTING SUBSYSTEM WITH "GROUP I" ROSE LANYARDS: Group I lanyards are fitted with a locking snaphook on each end. The snaphook must be connected to the D-ring of the Dyna Brake shock absorber to make up the complete lanyard connecting subsystem.



6.2.3.2 CREATING A NON-INTEGRAL LANYARD CONNECTING SUB-SYSTEM WITH "GROUP II" ROSE LANYARDS: Group II lanyards listed in Table 1 have a snaphook on one end and either a sewn loop or thimble on the other end. A Rose carabiner makes the connection between the loop or thimble end of the lanyard and the sewn loop end of a Dyna Brake shock absorber. Do not connect snaphook to sewn loop.

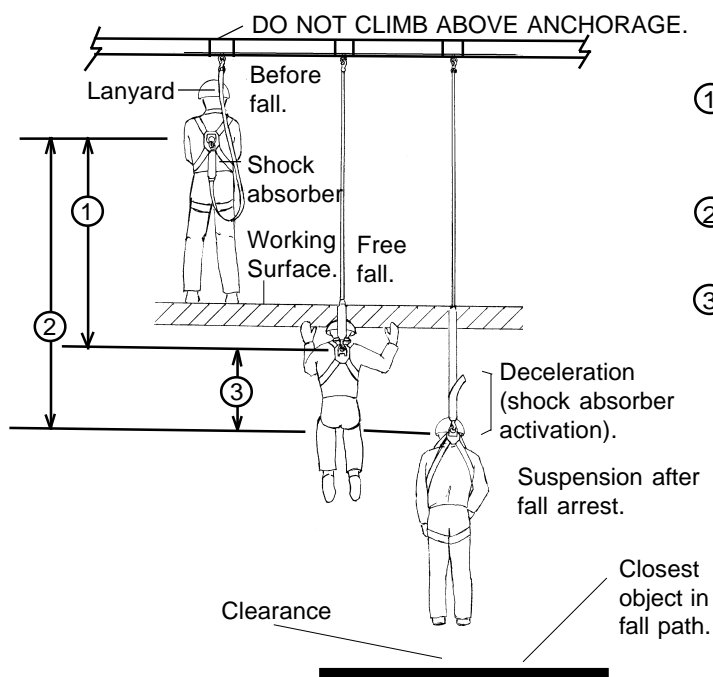


- 6.3 ANCHORAGES AND ANCHORAGE CONNECTORS:** Anchorages for personal fall arrest systems must have a strength capable of supporting a static load, applied in directions permitted by the system, of at least: (a) 3,600 lbf (16 kN) when certification exists, or (b) 5,000 lbf (22.2 kN) in the absence of certification. See ANSI Z359.1 for definition of certification. When more than one personal fall arrest system is attached to an anchorage, the anchorage strengths set forth in (a) and (b) must be multiplied by the number of systems attached to the anchorage. See ANSI Z359.1, section 7.2.3. This requirement is consistent with OSHA requirements under 20 CFR 1910, Subpart F, Section 1910.66, Appendix C. In addition, it is recommended that the user of personal fall arrest systems refer to ANSI Z359.1, Section 7, for important considerations in equipment selection, rigging, use, and training.

7.0 PLANNING THE USE OF SYSTEMS

Perform the hazard identification and evaluation described in section 3 of these instructions. Then plan the system(s) before starting work. Consider all possible paths of user movement and all factors that could affect the user's safety before, during, and after a fall anywhere along these paths. A qualified person must select the components, materials, anchorage and anchorage connectors to match the system application, the work, workplace hazards, and the environment. Consider the following points when planning the system(s).

- 7.1 ANCHORAGE AND ANCHORAGE CONNECTOR SELECTION:** Determine the necessary locations of anchorages to assure that the user will be continuously connected when exposed to hazards of falling. Select anchorages that are stable and have the strength required by section 6.3 of these instructions. Carefully select the locations of the anchorages to: (a) reduce possible free fall distance, (b) prevent swing fall hazards, and (c) provide clear space in the potential fall paths to avoid striking an object. Do not select anchorage locations that will require the user to work above them as this will increase the potential free fall and total fall distances. Plan the types of anchorage connectors that will need to be selected and refer to the instructions for same.
- 7.2 FREE FALL DISTANCE, TOTAL FALL DISTANCE, AND SYSTEM ELONGATION:** Personal fall arrest systems must be selected and rigged to ensure that potential free fall distances will never exceed 6 ft (1.8 m) as required by OSHA and ANSI Z359.1. [In Canada, free fall distance is limited to 5 ft (1.5 m) by regulation. ANSI A10.14 also restricts free fall distance to 5 ft (1.5 m)]. See separate instructions for connecting subsystems to determine the deceleration distance and dynamic elongation which must be allowed for in the space of potential fall paths. Total fall distance is the sum of free fall distance and deceleration distance. Dynamic elongation of the system (temporary elastic stretch of connecting components and subsystems) must be added to total fall distance and the user must allow for clearance.

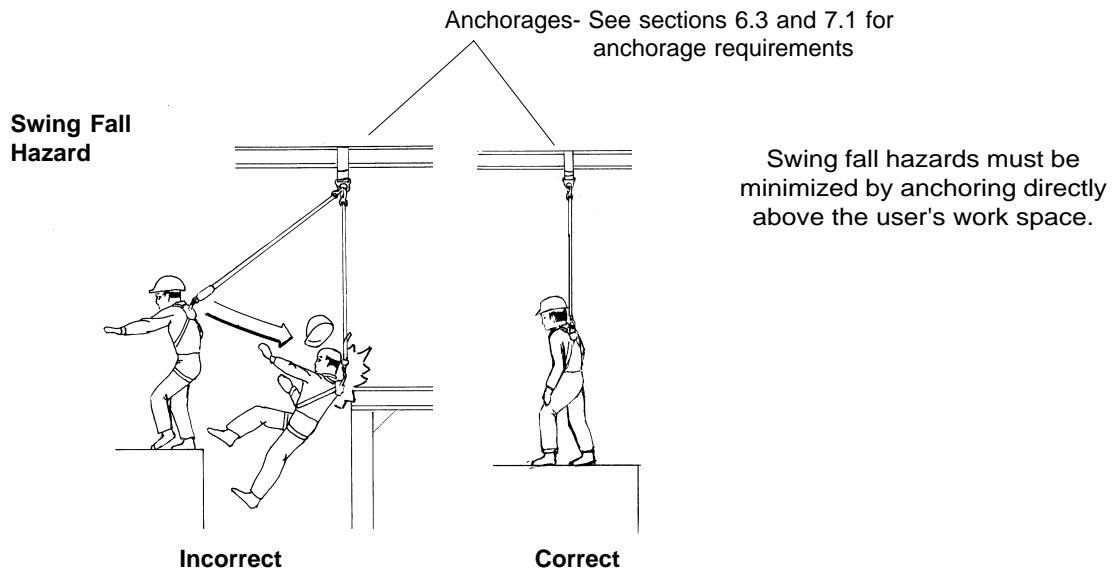


- ① Free fall distance. Limited to 6 ft (1.8 m) by OSHA and ANSI Z359.1. Limited to 5 ft (1.5 m) by ANSI A10.14 and Canadian regulations.
- ② Total fall distance. The sum of the free fall distance and deceleration distance.
- ③ Deceleration distance. Must not exceed 3.5 ft (1.1 m).

(Illustrations not to scale.
Details not shown.)

- 7.3 USER MOVEMENTS:** Identify all necessary movements of the user and the materials and equipment needed to perform the planned work. Plan for avoidance of the crossing or tangling of connecting subsystems of two or more workers. Anticipate user movements that might introduce hazards of the connecting subsystem passing under, about or between body parts or invite the user to clamp, knot or otherwise prevent the connecting subsystem from functioning properly. Establish controls to prevent these occurrences.

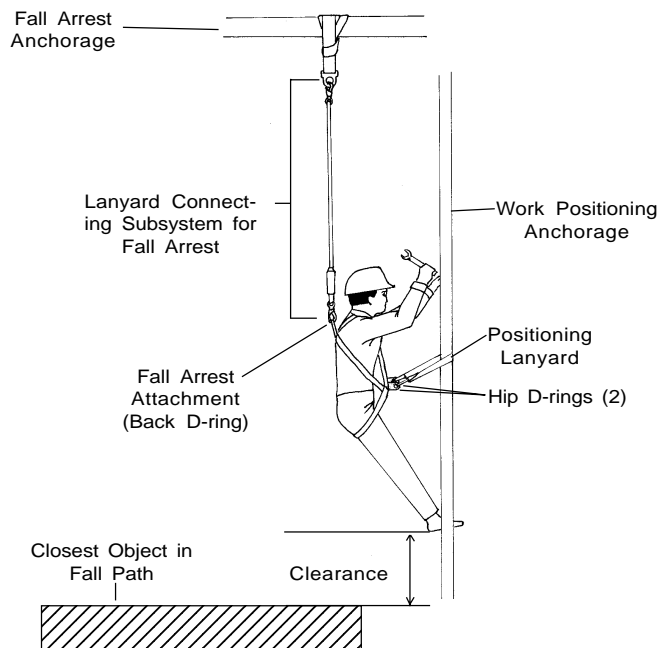
7.4 PENDULUM (SWING) FALLS: Swing falls can occur when the system is not anchored directly above the user. The force of striking an object in a pendular motion can cause serious injury. Always minimize swing falls by working as directly below the anchorage point as possible.



7.5 WORK POSITIONING SYSTEM APPLICATION: The work positioning system must be selected and rigged to ensure that potential free fall distance is reduced as close as possible to zero, to a maximum of 2 feet (0.6 m) in accordance with OSHA and ANSI A10.14.

! CAUTION

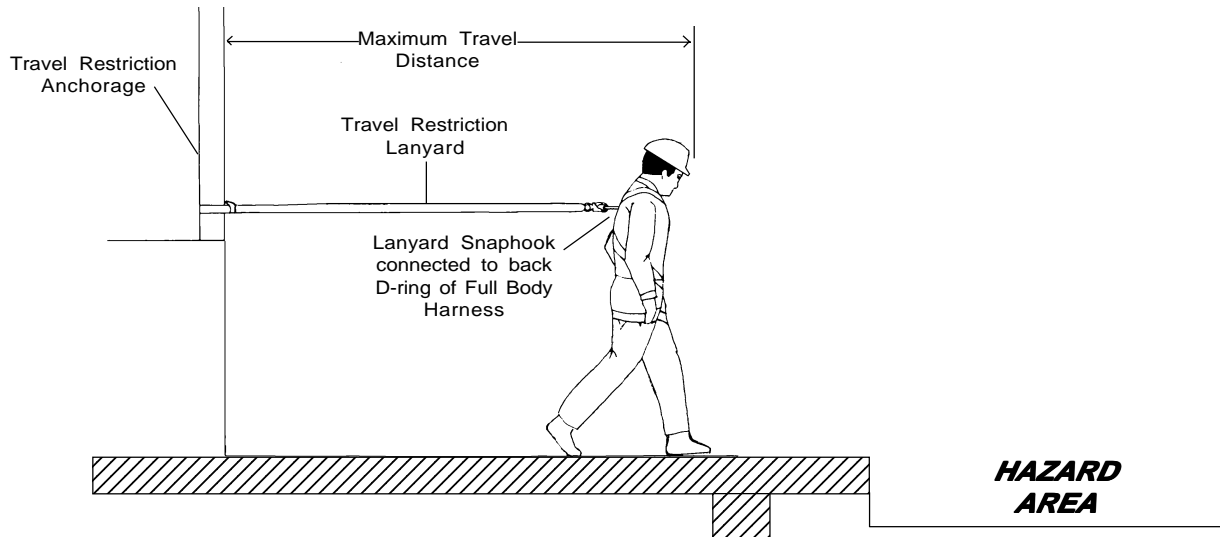
Positioning type restraint systems must be backed up by a separate and independent fall arrest system.



! CAUTION

Provide support to prevent lanyard from slipping out of position during use.

- 7.6 TRAVEL RESTRICTION SYSTEM APPLICATION:** Travel restriction systems must be selected and rigged to prevent the user from moving into an area of potential hazard. Select a lanyard which is compatible with the intended travel restriction anchorage. Lanyards with a loop on one end may be wrapped around or through columns, beams, and other anchorages. Lanyards with loops or thimble ends may be connected by the addition of a Rose carabiner to a suitable anchorage or anchorage connector. Lanyards with snaphooks must be connected to anchorages or anchorage connectors which are compatible in size, shape and strength. Do not form a loop with the snaphook and the lanyard element as this increases the possibility of accidental disengagement ("rollout"). Lanyard length must be adjusted to restrict the user from possible contact with the workplace hazard.



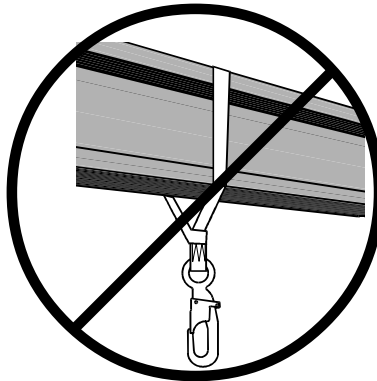
- 7.7 CLEAR SPACE IN FALL PATH:** Make certain that enough clearance is available in all potential fall paths to prevent striking an object. The amount of clearance needed depends upon the type of connecting subsystem used, and the location of the anchorage. Consult the manufacturer's instructions for the particular connecting subsystem or component for clearance needed.
- 7.8 HAZARDS IDENTIFIED IN WORKPLACE ASSESSMENT:** All hazards of the type set forth in section 3 of these instructions must be addressed and suitable controls planned and implemented. For example, if work must be performed near unavoidable sharp edges, plan to protect against cutting by use of heavy padding or other means of covering the sharp edge.
- 7.9 RESCUE AND EVACUATION:** The user must have a rescue plan and the means at hand to implement it. The plan must take into account the equipment and special training necessary to effect prompt rescue under all foreseeable conditions. If the rescue be from a confined space, the provisions of OSHA regulation 1910.146 and ANSI Z117.1 must be taken into account. Although a rescue plan and the means to implement it must always be in place, it is a good idea to provide means for user evacuation without assistance of others. This will usually reduce the time to get to a safe place and reduce or prevent risk to rescuers.

8.0 USAGE

- 8.1 LANYARD INSPECTION BEFORE EACH USE:** Inspect the lanyard to verify that it is in serviceable condition. Examine every inch of the lanyard element for severe wear, cuts, burns, frayed edges, abrasion, or other damage. Examine stitching for any pulled, loose, or torn stitches. See section 11 for inspection details. Do not use a lanyard if inspection of it reveals an unsafe condition.
- 8.2 MAKING PROPER CONNECTIONS:** When using a snaphook to connect to an anchorage or when coupling components of the system together, be certain accidental disengagement ("rollout") cannot occur. Rollout is possible when interference between a snaphook and the mating connector causes the snaphook's gate or keeper to accidentally open and release. Rollout occurs when a snaphook is snapped into an undersized ring such as an eye bolt or other non-compatibly shaped connector. Rollout can also occur when a lanyard is wrapped around the gate of a snaphook, especially a non-locking snaphook. Do not use snaphooks or connectors that will not completely close over the attachment object. Do not make knots in a lanyard. Do not hook the lanyard back onto itself. Snaphooks and carabiners must not be connected to each other. Do not attach two snaphooks into one D-ring. Do not attach a snaphook directly to a horizontal lifeline. Always follow the manufacturer's instructions supplied with each system component.

! CAUTION

Do not wrap the lanyard around an overhead beam or attempt to use the lanyard as an anchorage connecting device in a fall arrest system.

**9.0 CARE, MAINTENANCE AND STORAGE**

9.1 CLEANING INSTRUCTIONS: Clean the lanyard with a solution of water and mild laundry detergent. Dry hardware with a clean cloth and hang to air dry. Do not speed dry with heat. Excessive accumulation of dirt, paint or other foreign matter may prevent proper function of the lanyard, and, in severe cases, weaken the webbing. Questions concerning lanyard conditions and cleaning should be directed to Rose Manufacturing Company.

9.2 MAINTENANCE AND REPAIRS: Equipment which is damaged or in need of maintenance must be tagged as "UNUSABLE" and removed from service. Corrective maintenance (other than cleaning) and repair, such as replacement of elements, must be performed by the Rose factory. Do not attempt field repairs.

The moving parts of snaphooks may require periodic lubrication. Use a lightweight (low viscosity) penetrant oil that has good resistance to temperature extremes, moisture and corrosion. Do not over-lubricate. Wipe off excess oil with a clean, dry cloth. Follow the lubricant manufacturer's instructions.

9.3 STORAGE: Store the lanyard in a cool, dry and clean place out of direct sunlight. Avoid areas where heat, moisture, light, oil, chemicals (or their vapors) or other degrading elements may be present. Equipment which is damaged or in need of maintenance should not be stored in the same area as usable equipment. Heavily soiled, wet, or otherwise contaminated equipment should be properly maintained (e.g. cleaned and dried) prior to storage. Prior to using equipment which has been stored for long periods of time, a Formal Inspection should be performed by a competent person. See section 12.

10.0 MARKINGS AND LABELS

10.1 The following labels must be present, legible and securely attached to the lanyard. The Formal Inspection Grid must be punched with a date (month/year) within the last six months. If not, remove the lanyard from use and mark it as "UNUSABLE" until a Formal Inspection is performed in accordance with section 12. See section 4 for location of labels.

Data Card Side 1

Rose LANYARD

Material: 1 in. Nylon
Length: 6 ft (1.8 m)
Model: 50S:XXX

Capacity: 310 lbs (140 kg) (includes person + clothes + tools)
Free Fall Limit (when used with shock absorber for fall arrest): 6 ft (1.8 m)
ANSI Z359.1, OSHA 21.1.1.3, ANSI A10.14, Type I, CSA
Free Fall Limit (for positioning): 2 ft (0.6 m) ANSI A10.14 Type I, OSHA, Manufacturer recommends as close to zero as possible.
Meets: OSHA Requirements; ANSI Z359.1, ANSI A10.14, CSA Z259.1.

DATE MADE: 5/93
SERIAL NUMBER: 000000

1 23456789012

DO NOT REMOVE LABELS.

Leaf 1 Side 1

WARNING

Attention: Consult your safety director.
Atención: Consultar su director de seguridad.
Attention: Consultez votre directeur de sécurité.
Achtung: Fragen Sie bitte Ihren Sicherheitsdirektor!
Attenzione: Vuole rivolgersi al Suo direttore di sicurezza.

GENERAL: Do not use this product unless a qualified person has inspected workplace and determined that identified hazards can neither be eliminated nor exposures to them prevented. The manufacturer included separate instructions with this product. Copies are available. Read and heed all instructions, labels and warnings for use with it. **Failure to do so may result in serious injury or death.**

Leaf 2 Side 1

WARNING

SELECTION AND USE: Do not connect or combine with other components in ways which may hinder or defeat function of system. See separate instructions.

- Do not expose to chemicals and corrosives which could weaken parts. Consult manufacturer if in doubt.
- Do not expose to sharp edges, abrasives, surfaces, sparks, flame or heat above 185° F (85° C).
- Keep safe distance from moving machinery and electrical sources. Metal parts conduct electricity.
- Do not reuse if subjected to fall arrest forces. Remove from use. Label "UNUSABLE" until destroyed.
- Do not misuse, abuse, alter or attempt repairs to this product. Disregard voids warranty. Only the manufacturer or persons authorized in writing by the manufacturer are permitted to make repairs.
- Have rescue & evacuation plans and means at hand to implement.

Leaf 3 Side 1

WARNING

RIGGING AND USE: Anchorage must be at least 5,000 lbf (22.2 kN) strength multiplied by number of persons attached to it.

- Keep lanyard as short as practical to minimize fall distance.
- Always check connections. This product's snaphooks are the self-closing, self-locking type. They must be compatible with mating connectors to reduce rollout possibility and must be securely closed and locked when coupled to another connector. Do not directly connect to webbing, rope or wire rope. Be sure dimensions, shape and pressure of connected and nearby objects cannot unhook or open snap gate.
- Do not connect lanyards, snaphooks or carabiners to each other.

Leaf 4 Side 1

CAUTION

INSPECTION: Inspect for malfunction and missing, broken, distorted, damaged, corroded, weakened and worn parts. See separate instructions for inspection details. If product is defective or if 6 months pass without formal inspection, remove from use. Label "UNUSABLE" until reinspected, repaired or destroyed.

- Separate competent person must formally inspect at least every 6 months.
- Punch inspection grid if product passes formal inspection.

FORMAL INSPECTION GRID

J	F	M	A	M	J	J	A	S	O	N	D
94											
95											
96											
97											
98											

PUNCH GRID ON DATE OF FIRST USE

Data Card Side 2

Note: On product sold in Canada a French translation of the front side of this label will appear in this space.

Leaf 1 Side 2

WARNING

SELECTION AND USE: Human tolerance to fall arrest and suspension is reduced by age, unfitness and pre-existing disorders. If in doubt, consult a physician before using this product. Pregnant women and minors must never use.

RIGGING AND USE: For fall arrest, connect one lanyard snaphook to attachment element (D-ring) of shock absorber, attach other snaphook to anchorage or anchorage connector.

- For work positioning, pass lanyard around suitable anchorage and connect lanyard snap-hooks to hip D-rings of body support.
- For travel restriction, connect one end of lanyard to anchorage, opposite end to attachment element of body support.

Leaf 2 Side 2

WARNING

SELECTION AND USE: Human tolerance to fall arrest and suspension is reduced by age, unfitness and pre-existing disorders. If in doubt, consult a physician before using this product. Pregnant women and minors must never use.

RIGGING AND USE: For fall arrest, connect one lanyard snaphook to attachment element (D-ring) of shock absorber, attach other snaphook to anchorage or anchorage connector.

- For work positioning, pass lanyard around suitable anchorage and connect lanyard snap-hooks to hip D-rings of body support.
- For travel restriction, connect one end of lanyard to anchorage, opposite end to attachment element of body support.

Leaf 3 Side 2

WARNING

RIGGING AND USE: Storage below used path. See separate instructions for description of fall path and fall distance.

- Avoid making multiple connections to a single D-ring.
- Do not kink, twist or knot lanyard.

CARE AND STORAGE: Clean with mild soap and water. Air to dry. Do not apply heat.

- Store in cool, dry and clean place away from direct sunlight and chemical vapors.
- Remove from use if improperly maintained. Label "UNUSABLE" until proper maintenance is performed or until destroyed.

Leaf 4 Side 2

WARNING

RIGGING AND USE: Storage below used path. See separate instructions for description of fall path and fall distance.

- Avoid making multiple connections to a single D-ring.
- Do not kink, twist or knot lanyard.

CARE AND STORAGE: Clean with mild soap and water. Air to dry. Do not apply heat.

- Store in cool, dry and clean place away from direct sunlight and chemical vapors.
- Remove from use if improperly maintained. Label "UNUSABLE" until proper maintenance is performed or until destroyed.

Leaf 1 Side 2

WARNING

USER TRAINING: To meet standards, the user must be trained before using this product. The manufacturer offers training.

SELECTION AND USE: This product performs as stated when tested to the relevant standards. It is a component in a lanyard connecting subsystem for fall arrest when used with an ANSI Z359.1 approved energy (shock) absorber. Lanyard may also be used in a personal restraint system. Restraint systems require a separate, independent fall arrest system as described in ANSI Z359.1. CSA standard Z259.1 certification is applicable to the device only. CSA has not investigated the anchorage system. A qualified person must select the components, materials and anchorage to match the system application, the work, workplace hazards and the environment.

Leaf 2 Side 2

WARNING

USER TRAINING: To meet standards, the user must be trained before using this product. The manufacturer offers training.

SELECTION AND USE: This product performs as stated when tested to the relevant standards. It is a component in a lanyard connecting subsystem for fall arrest when used with an ANSI Z359.1 approved energy (shock) absorber. Lanyard may also be used in a personal restraint system. Restraint systems require a separate, independent fall arrest system as described in ANSI Z359.1. CSA standard Z259.1 certification is applicable to the device only. CSA has not investigated the anchorage system. A qualified person must select the components, materials and anchorage to match the system application, the work, workplace hazards and the environment.

Leaf 3 Side 2

WARNING

RIGGING AND USE: Storage below used path. See separate instructions for description of fall path and fall distance.

- Avoid making multiple connections to a single D-ring.
- Do not kink, twist or knot lanyard.

CARE AND STORAGE: Clean with mild soap and water. Air to dry. Do not apply heat.

- Store in cool, dry and clean place away from direct sunlight and chemical vapors.
- Remove from use if improperly maintained. Label "UNUSABLE" until proper maintenance is performed or until destroyed.

Leaf 4 Side 2

WARNING

RIGGING AND USE: Storage below used path. See separate instructions for description of fall path and fall distance.

- Avoid making multiple connections to a single D-ring.
- Do not kink, twist or knot lanyard.

CARE AND STORAGE: Clean with mild soap and water. Air to dry. Do not apply heat.

- Store in cool, dry and clean place away from direct sunlight and chemical vapors.
- Remove from use if improperly maintained. Label "UNUSABLE" until proper maintenance is performed or until destroyed.

11.0 INSPECTION BEFORE EACH USE

11.1 INSPECTION FREQUENCY: The lanyard must be inspected by the user before each use. Additionally, it must be inspected by a competent person other than the user at intervals of no more than six months. The competent person inspection is referred to as Formal Inspection. See section 12 for Formal Inspection procedures.

CAUTION

If the lanyard has been subjected to fall arrest or impact forces, it must be immediately removed from service and marked as "UNUSABLE" until destroyed.

11.2 PROCEDURE FOR INSPECTION BEFORE EACH USE: Perform the following steps in sequence. If in doubt about any inspection point, consult Rose or a competent person who is qualified to perform Formal Inspection as set forth in section 12.

Step 1: Inspect the lanyard labels to verify that they are present and legible. See section 4 for location of labels for each model. See section 10 for the specific labels that should be present and the information contained on those for the model number shown in Table 1 of these instructions. Check the Formal Inspection Grid to be sure a Formal Inspection has been performed within the last six months. If the grid does not indicate that a Formal Inspection has been performed within the last six months (by being punched), or if any labels are missing or illegible, remove the lanyard from use and mark it as "UNUSABLE" until a Formal Inspection is performed by a competent person.

Step 2: Inspect all fabric (fibrous) parts, including webbing (straps) and their stitching, and ropes.

- (a) Inspect all webbing (straps) and stitching for evidence of defects or damage, including: cuts, fraying, pulled or broken threads, loose or torn threads, abrasion, excessive wear or elongation, altered or missing straps or stitching, knots, burns, and damage from heat or chemical attack.
- (b) Inspect all fibre ropes for cuts, pulled or broken fibres, abrasion, excessive wear or aging, excessive elongation, reduction of rope diameter, altered or missing rope segments, hockling (unlaying and kinking of strands), burns, and damage from heat or chemical attack. Inspect for knots, loosening or unbraiding of splices, excessive fuzziness of fibres, and for very soft condition that easily allows the rope to unlay (unwind).

Step 3: Inspect all metallic parts for evidence of defects, damage, alteration and missing parts.

- (a) For snaphooks, adjusters, and swaged fittings and metal thimbles on wire rope, inspect for deformation, fractures, cracks, corrosion, deep pitting, burrs, sharp edges, cuts, deep nicks, loose parts, and evidence of excessive heat or chemical exposures. Inspect snaphook and function by cycling the unlocking, opening, closing and locking features several times. Refer to section 4.2 for description of these functions. Gates must automatically close and snugly seat against the nose. The locking mechanism must retain the gate tip within 1/8 inch (3 mm) of the nose when finger pressure is firmly applied to the gate in any direction. Inspect for weak springs, loose rivets and binding of the gate or lock.
- (b) For wire rope, inspect for broken wires, kinks, unlaying of strands, corrosion, diameter changes, loosening of thimbles or swaged fittings, and evidence of damage from heat or chemical attack.

Step 4: Inspect all plastic parts (i.e. rope thimbles, labels and vinyl cover of wire rope) for cuts, broken parts, alteration, excessive wear, missing and loose parts. (Labels are to be additionally checked in accordance with Step 1 above.) Inspect for evidence of burns, excessive heat and chemical attack.

Step 5: Inspect each component and subsystem of the complete system in accordance with the associated manufacturer's instructions. See section 6 for a description of the make-up of the different types of subsystems and systems.

11.3 CORRECTIVE ACTION: When inspection in accordance with section 11.2 reveals signs of inadequate maintenance, the lanyard must be immediately removed from service and marked as "UNUSABLE" until destroyed or subjected to corrective maintenance by the user's organization in accordance with section 9. Defects, damage, excessive wear, malfunction, and aging are generally not repairable. If detected, immediately remove the lanyard from use and mark it as "UNUSABLE" until destroyed. For final disposition, submit the lanyard to a competent person who is authorized to perform Formal Inspection. If there is any question as to reparability, contact Rose or a service center authorized in writing by Rose before further use of the product.

CAUTION

Only Rose Manufacturing Company or parties with written authorization from Rose may make repairs to the lanyard.

12.0 FORMAL INSPECTION

- 12.1 FORMAL INSPECTION FREQUENCY:** The lanyard must be formally inspected by a competent person other than the user at intervals of no more than six months. (The qualifications of a competent person are established by OSHA.) If the product is exposed to severe working conditions, more frequent formal inspections may be required. The frequency of inspection by a competent person should be established by the user's organization based on such factors as the nature and severity of workplace conditions, modes of use, and exposure time of the equipment. The competent person should perform a methodical and thorough visual and tactile inspection by following the inspection procedure in section 12.3. The inspection results should be recorded in the Formal Inspection Log and retained for reference. In addition, if the lanyard passes Formal Inspection, the competent person should punch the date (month and year) of Formal Inspection on the grid supplied with the labels on each product. The user should never punch this grid; however, the user should check it before each use to be sure a Formal Inspection has been performed within the last six months.
- 12.2 CONTROL OF EQUIPMENT:** The user's organization should establish and enforce a policy and procedure whereby any lanyard that is found to be defective, damaged, or in need of maintenance be immediately removed from use, marked as "UNUSABLE" and immediately thereafter submitted to custody of the competent person responsible for Formal Inspection. This has the benefits that: 1) defective equipment is secured from further use until proper action is taken; 2) uniform standards are applied for determining whether the equipment is acceptable or not acceptable for further use; 3) uniform methods of cleaning and other maintenance are applied; and 4) there is a central point for evaluation of conditions that may be recurring and require preventive measures such as coordination with the equipment manufacturer, selection of alternate equipment, additional training of equipment users, or changes to the workplace conditions.
- 12.3 FORMAL INSPECTION PROCEDURE:** The Formal Inspection Procedure is similar to the user's inspection before each use described in section 11. However, it differs in three important respects, namely: 1) it is performed by a competent person other than the user who is trained and authorized to perform Formal Inspection for the user's organization; 2) it is more detailed and is methodically recorded on a Formal Inspection Log that is kept on file for future reference; and 3) it results in final disposition of the equipment as either "acceptable" (indicated by the formal inspector punching the current month/year in the Formal Inspection Grid on one of the product labels) or as "not acceptable" followed by destruction of the product.

There are three forms that are important to the Formal Inspection Procedure. They are the Formal Inspection Diagram ("DIAGRAM"), the Formal Inspection Log ("LOG"), and the Formal Inspection Checklist and Codes ("CHECKLIST"). These forms relate and refer to each other so it is necessary to understand their purposes and uses before discussing the inspection procedure.

- 12.3.1 DIAGRAM:** This is a set of line drawings of the different models of lanyards. Each has numbered callouts of the parts. The numbers called out in the DIAGRAM correspond to those shown on the column titled "INSP. POINT" (inspection point) on the LOG.
- 12.3.2 LOG:** This is the form to be used to record observations made during the Formal Inspection. The Model No., Serial No. and Date Made are recorded by the inspector from the Data Card in the label set. The formal inspector's name and the inspection date are entered by the inspector. The "Disposition" entry is the last entry made on this form after all observations have been recorded. The entry is either "Acceptable" ("PASS") or "Not Acceptable" ("FAIL"). The columns on the LOG are as follows:

INSP. POINT - Inspection point. The lanyard part designated in the callouts on the DIAGRAM.

DESCRIPTION - Name of the lanyard inspection point. There are three broad categories of inspection points, namely, fabric parts, metallic parts and plastic parts. There are sub-categories under these three main categories.

QTY/L - Quantity per lanyard. The quantity of each lanyard inspection point that must be inspected. Note that the quantity of certain items will vary between models and that some items are not present on all models.

COND. - Condition. The condition of the lanyard part is indicated here by entry of the appropriate Condition Code shown on the CHECKLIST (e.g. W1, S4, M0, etc.). Alternatively, the inspector may simply enter "FAIL" if a defective condition exists and make no entry if no defect exists.

OVERALL ASSESS. - Overall assessment. The inspector's evaluation of the overall acceptability or non-acceptability of the part category (i.e. webbing, stitching, fibre rope, metallic, plastic). The appropriate Overall Assessment Code defined on the CHECKLIST is entered here (e.g. WA, SN, MA, PN). Alternatively, the inspector may simply enter "FAIL" if a defective condition exists and make no entry if no defect exists.

COMMENTS - Indicate pertinent inspector observations here.

12.3.3 CHECKLIST AND CODES: This is a table which categorizes the different types of lanyard parts into broad categories (e.g. webbing, stitching, metallic, plastic). For each of these categories that are applicable to a specific product, the formal inspector checks the lanyard parts for each of the associated conditions (e.g. cuts, fraying, abrasion, wear, etc.). The codes for the detected conditions are entered in the Condition column on the LOG (e.g. W1, S4, M0, etc.). Overall assessment codes are given, along with the criteria for assigning them, so the inspector can decide if the lanyard is acceptable or not acceptable for further use (e.g. WA, SN, MA, PN). Alternatively, instead of using these codes, the inspector may simply enter "FAIL" if a defective condition exists and make no entry if no defect exists.

12.3.4 FORMAL INSPECTION PROCEDURAL STEPS:

Step 1: Record on the LOG the Model No., Serial No. and Date Made information shown on the Data Card of the product label set. Record the inspector's name and inspection date.

Step 2: Arrange the lanyard so the parts to be inspected are readily visible.

Step 3: Starting with the webbing category of parts shown on the LOG, inspect each part (inspection point) one at a time. Refer to the DIAGRAM for identification of each inspection point. Each part must be inspected for the possible presence of the conditions shown on the CHECKLIST. Enter in the Condition column on the LOG the proper Condition Code (listed on the CHECKLIST) or "FAIL" if a defect exists. If there is any question whether the product condition has materially changed since the last Formal Inspection, retrieve and review the prior Formal Inspection records for the specific product.

Step 4: Repeat steps 2 and 3 for the stitching, fibre rope, metallic and plastic categories of part types.

Step 5: Determine whether the part (inspection point) is acceptable or not acceptable. If an inspection point has a defective condition, enter in the Overall Assessment column of the LOG the proper code taken from the CHECKLIST (e.g. WN, SN, MN, PN) or simply "FAIL."

Step 6: Determine disposition of the lanyard. If in step 5 it has been determined that the lanyard is not acceptable, enter "N" or "FAIL" in the Disposition space on the LOG. In addition, a notation should be made in this space as to whether the lanyard is to be destroyed, returned to manufacturer/distributor, etc.

Step 7: If in step 5 it has been determined that the lanyard is acceptable for further use, enter "A" or "PASS" in the Disposition space on the LOG. Punch the Formal Inspection Grid on the appropriate product label with the date (month/year) corresponding to the inspection date to indicate to lanyard users that the product has passed inspection as of that date.

Step 8: File the LOG for future reference.

12.4 FORMAL INSPECTION CHECKLIST AND CODES

TYPE OF PART INSPECTED	CONDITION	COND. CODE	OVERALL ASSESSMENT CODE	LEGEND
Webbing (straps)	Cuts/fraying	W1	WA - (Webbing acceptable)	<p>Disposition:</p> <p>A - (Acceptable) N - (Not acceptable)</p> <p>Enter "A" (or "PASS") or "N" (or "FAIL") in Disposition blank on Formal Inspection Log.</p> <p>Criteria for disposition of "N" (Not acceptable):</p> <p>If there is one or more Overall Assessment Code of "N" type (e.g. WN, SN, MN, PN).</p>
	Abrasion/wear	W2		
	Partially missing/altered	W3	WN - (Webbing not acceptable)	
	Burns/heat exposure	W4		
	Chemical exposure	W5		
	Knotted/elongated	W6		
	Other	W7		
No visible change	W0			
Stitching	Cut/pulled/loose thread	S1	SA - (Stitching acceptable)	
	Abrasion/wear	S2		
	Partially missing/altered	S3	SN - (Stitching not acceptable)	
	Burns/heat exposure	S4		
	Chemical exposure	S5		
	Other	S6		
	No visible change	S0		
Fibre rope	Cut/pulled/broken fibres	R1	RA - (Rope acceptable)	
	Abrasion/wear/fuzziness	R2		
	Partially missing/altered	R3	RN - (Rope not acceptable)	
	Burns/heat exposure	R4		
	Chemical exposure	R5		
	Hockling/knotted	R6		
	Elongated/over-soft	R7		
	Reduced diameter	R8		
	Loose/unbraided splice	R9		
	No visible change	R0		
	Other	R11		
Metallic	Deformed/fractured	M1	MA - (Metallic acceptable)	
	Corroded/deep pits	M2		
	Missing/loose	M3		
	Heat exposure	M4	MN - (Metallic not acceptable)	
	Chemical exposure	M5		
	Burrs/sharp edges	M6		
	Cuts/deep nicks	M7		
	Malfunction	M8		
	Other	M9		
	No visible change	M0		
Wire rope (cable)	Cut/broken wire	C1	CA - (Cable acceptable)	
	Abrasion/wear/corrosion	C2		
	Partially missing/altered	C3		
	Burns/heat exposure	C4	CN - (Cable not acceptable)	
	Chemical exposure	C5		
	Kinked/unlaid strands	C6		
	Reduced diameter	C7		
	Other	C8		
	No visible change	C0		
Plastic	Cut/broken/deformed	P1	PA - (Plastic acceptable)	
	Wear damage	P2		
	Missing/loose	P3		
	Burns/heat exposure	P4	PN - (Plastic not acceptable)	
	Chemical exposure	P5		
	Other	P6		
	No visible change	P0		

12.5 FORMAL INSPECTION LOG FOR ROSE LANYARD

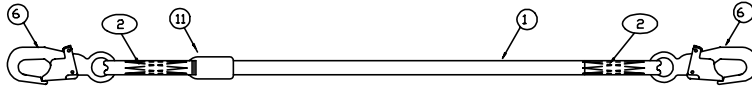
Model No.: 505202 Inspector: J. W. Doe
 Serial No.: 012345 Inspection Date: 11/17/97
 Date Made: 5/97 Disposition: N - See item 1, Destroy lanyard.

INSP. POINT	DESCRIPTION	QTY/L	COND. (a)	OVERALL ASSESS.(a)	COMMENTS
FABRIC (FIBROUS) PARTS					
WEBBING (STRAPS)					
1	Lanyard leg	1	<i>W1</i>	<i>WN</i>	<i>Lanyard cut, fraying</i>
STITCHING					
2	Lanyard leg	2	<i>S0</i>	<i>SA</i>	
FIBRE ROPE					
3	Lanyard leg	1	-----	-----	
4	Splices	2	-----	-----	
METALLIC PARTS					
5	Lanyard leg (wire rope)	1	-----	-----	
6	Snaphooks (b)	2	<i>M0</i>	<i>MA</i>	
6	Snaphook (with loop) (b)	1	-----	-----	
7	Adjuster	1	<i>M9</i>	<i>MA</i>	<i>Some scratches - Minor</i>
8	Swaged fitting	4	-----	-----	
9	Thimble	2	-----	-----	
10	Hog ring	2	-----	-----	
PLASTIC PARTS					
11	Labels	5	<i>P0</i>	<i>PA</i>	
12	Thimble	1	-----	-----	
13	Vinyl coating, wire rope	1	-----	-----	

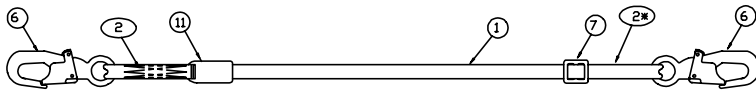
- (a) Optional simplified PASS/FAIL inspection format: Whenever an acceptable condition is found, the entry in the COND. and OVERALL ASSESS. columns may be left blank. Whenever a defective condition is found, enter "FAIL." The inspection may end upon detection of a single defective condition.
- (b) The function of snaphooks (and the parts thereof) must be carefully checked with reference to sections 4.2.1, 4.2.2 and 11.2.
- (c) Blank copies of this LOG, with associated CHECKLIST and DIAGRAM, are available from Rose Manufacturing Company. Call Toll Free (800) 722-1231.

12.6 FORMAL INSPECTION DIAGRAM

12.6.1 LANYARD WITH FIXED LENGTH STRAP

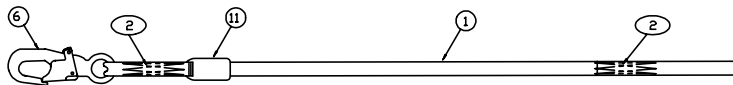


12.6.2 LANYARD WITH ADJUSTABLE LENGTH STRAP

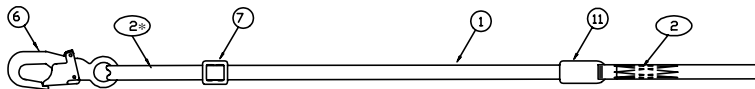


* Opposite side not shown

12.6.3 LANYARD WITH SEWN LOOP, FIXED LENGTH STRAP



12.6.4 LANYARD WITH SEWN LOOP, ADJUSTABLE LENGTH STRAP

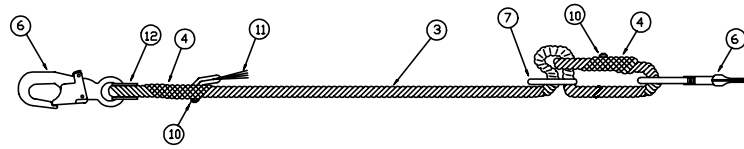


* Opposite side not shown

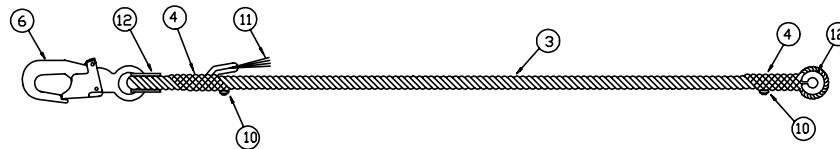
12.6.5 LANYARD WITH FIXED LENGTH ROPE



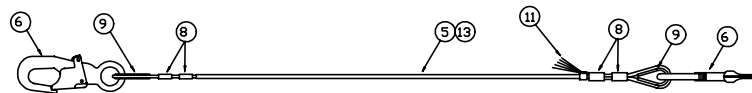
12.6.6 LANYARD WITH ADJUSTABLE LENGTH ROPE



12.6.7 LANYARD WITH SPLICED THIMBLE EYE, FIXED LENGTH ROPE



12.6.8 LANYARD WITH FIXED LENGTH WIRE ROPE



12.6.9 LANYARD WITH SWAGED METAL THIMBLE, FIXED LENGTH WIRE ROPE



WARRANTY

Express Warranty – Rose/MSA warrants that the product furnished is free from mechanical defects or faulty workmanship for a period of one (1) year from first use or eighteen (18) months from date of shipment, whichever occurs first, provided it is maintained and used in accordance with Rose/MSA's instructions and/or recommendations. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. Rose/MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own authorized service personnel or if the warranty claim results from misuse of the product. No agent, employee or representative of Rose/MSA may bind Rose/MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. Rose/MSA makes no warranty concerning components or accessories not manufactured by Rose/MSA, but will pass on to the Purchaser all warranties of manufacturers of such components. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF. ROSE/MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. For additional information please contact the Customer Service Department at 1-800-MSA-2222 (1-800-672-2222).

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