

## USER INSTRUCTIONS

# LANYARD WITH INTEGRAL DYNA BRAKE<sup>®</sup> SHOCK ABSORBER

### 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 DYNA BRAKE LANYARD SPECIFICATIONS

### 1.1 SPECIFICATIONS - ROSE DYNA BRAKE LANYARDS (LANYARD CONNECTING SUBSYSTEMS)

- Rose Dyna Brake lanyards identified in Table 1 meet ANSI Z359.1, ANSI A10.14 and applicable OSHA regulations. Those designated by note (c) are also listed by CSA in accordance with CSA Z259.1 and CSA Z259.11. These instructions, and markings borne by the products, fulfill the instruction and marking requirements of those standards and regulations.
- Snaphooks are zinc plated, forged alloy steel and 100% proof tested to 3,600 lbf (16 kN). Snaphooks 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 or stamped 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 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, 1/2 in (13 mm) or 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) must not exceed 6.0 ft (1.8 m) in accordance with OSHA and ANSI Z359.1. The Canadian Occupational Health & Safety Act of 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.
- When used as part of a personal fall arrest system, fall arresting forces permitted by the shock absorber do not exceed 900 lbf (4.0 kN).
- Capacity range is 130 lb (59 kg) to 310 lb (140 kg) including weight of the user plus clothing, tools and other user-borne objects.

## 2.0 TRAINING

It is the responsibility of the purchaser of the Rose Dyna Brake 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 shock absorbing lanyard; (3) how to determine and acceptably limit free fall distance, total fall distance, and maximum arresting force; (4) how to select and make connections to anchorages and anchorage connectors; (5) proper attachment locations on the user's harness and other components of personal fall arrest 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 shock absorbing lanyard and associated equipment and of failure to follow instructions and training. If the shock absorbing 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 Dyna Brake 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 shock absorbing 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
- Sparks
- Flames
- Heat-producing operations
- Chemicals
- Electric hazards
- Sharp objects
- Environmental
- Abrasive surfaces
- Moving equipment
- Moving materials
- Unguarded openings
- Contaminants
- Climatic factors
- Weather factors
- Unstable uneven surfaces
- Confined space hazards
- Slippery surfaces

Foreseeable changes in any of these conditions, taken individually or collectively, must be identified, evaluated, and controlled. The materials and construction of the shock absorbing 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.

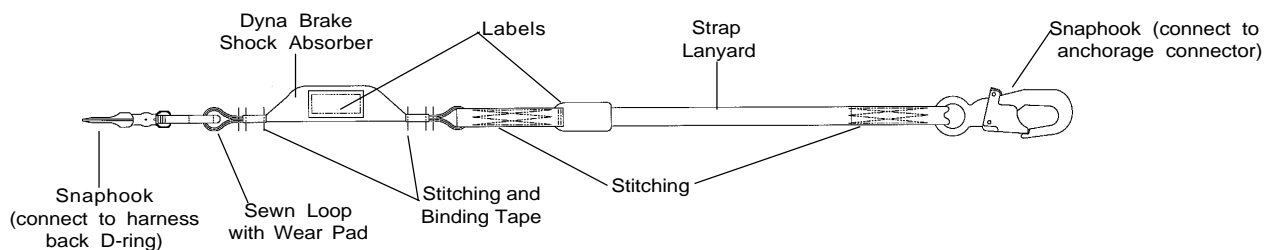
The workplace assessment must identify all paths of intended user movement and all hazards along such paths. The user must identify the required range of mobility in each hazard zone and note the location and distance to all obstructions in potential fall paths. Lateral obstructions which could be contacted in a pendular fall arrest must be noted. The shock absorbing 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 and activation distance of the assembly. If the Dyna Brake 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 DYNA BRAKE LANYARDS

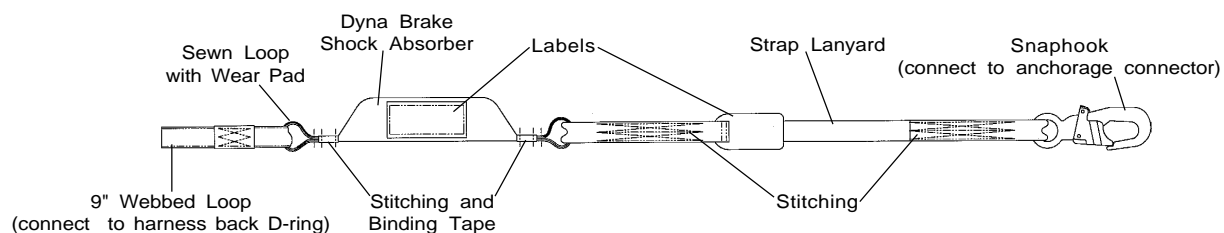
**4.1 CONFIGURATIONS OF SHOCK ABSORBING LANYARDS:** The configurations shown below are not to scale and are shown with RL20 self-locking snaphooks. HL2000 self-locking snaphooks (not shown) are connected to the products in the same manner. Lanyard straps and ropes may be either nylon or polyester. See Table 1. For a given product, the shock absorber webbing is made of the same type fibre (i.e. nylon or polyester) as the lanyard rope or webbing. The intended purpose of each element in Dyna Brake lanyards is given in sections 4.2 through 4.5.

#### 4.1.1 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP

(NOT TO SCALE)

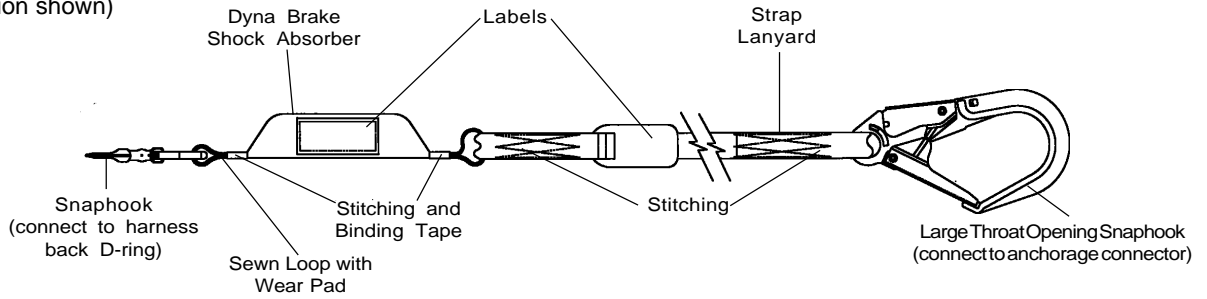


#### 4.1.2 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP WITH 9" LOOP



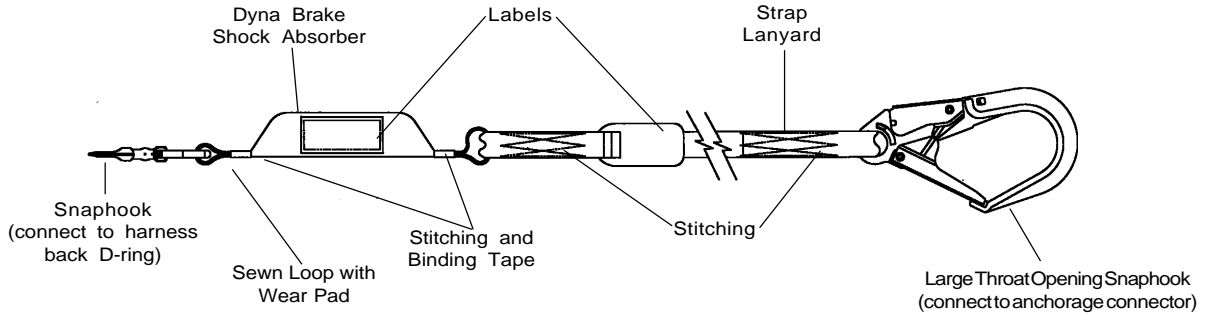
**4.1.3 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP WITH LARGE THROAT OPENING SNAPHOOK**

(fixed length version shown)

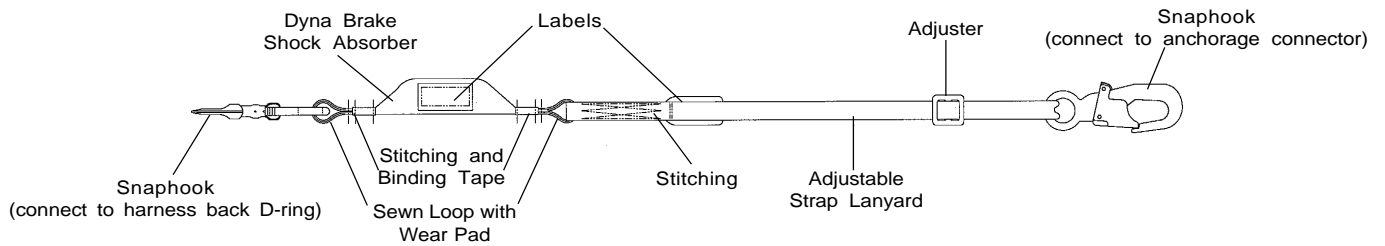


**4.1.4 DYNA BRAKE LANYARD WITH ADJUSTABLE LENGTH STRAP WITH LARGE THROAT OPENING SNAPHOOK**

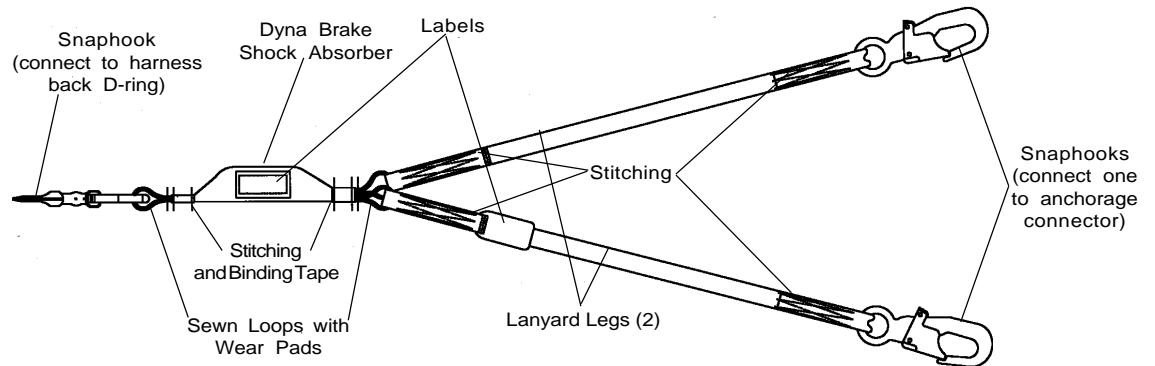
(adjustable length version shown)



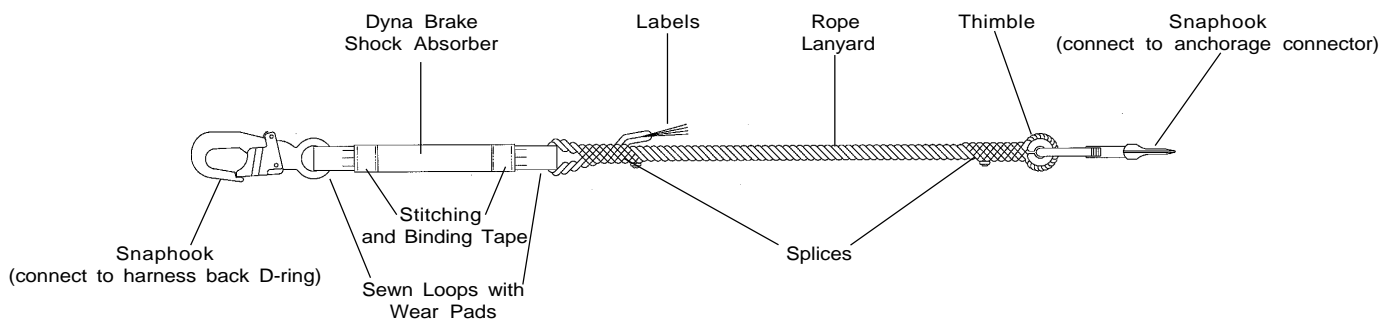
**4.1.5 DYNA BRAKE LANYARD WITH ADJUSTABLE LENGTH STRAP**



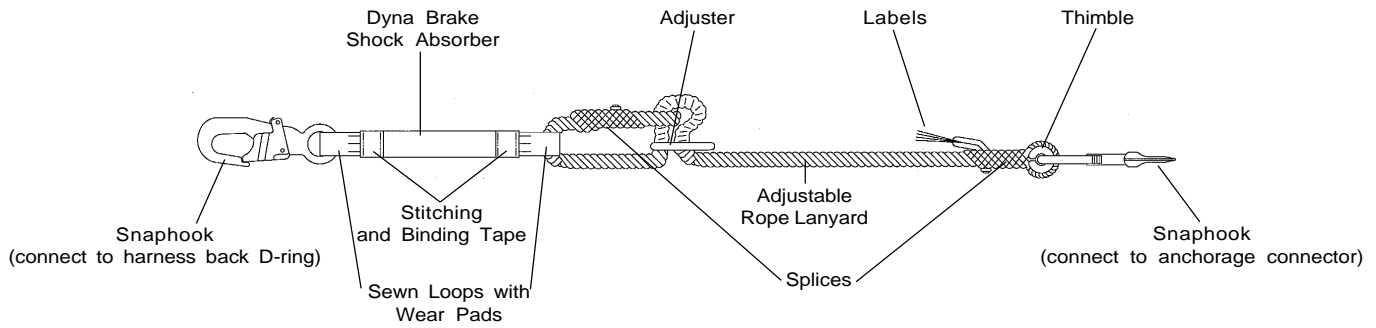
**4.1.6 TWIN DYNA BRAKE LANYARD WITH FIXED AND ADJUSTABLE LENGTH STRAPS (fixed length RL20 version shown)**



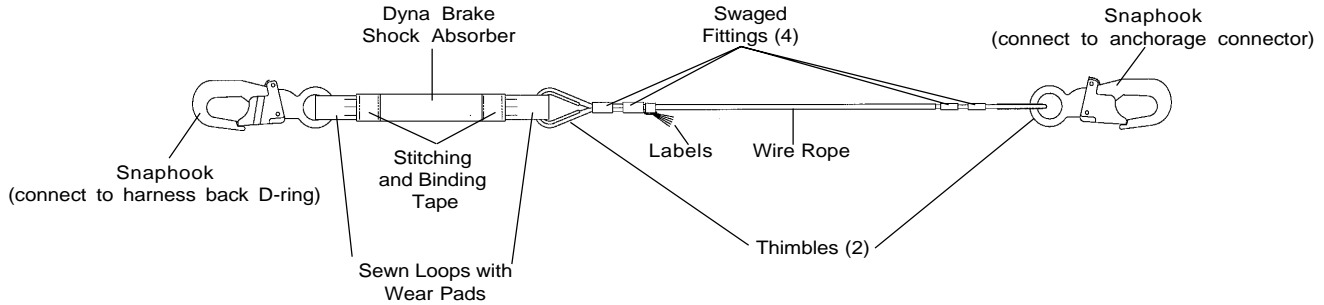
**4.1.7 DYNA BRAKE LANYARD WITH FIXED LENGTH ROPE**



**4.1.8 DYNA BRAKE LANYARD WITH ADJUSTABLE LENGTH ROPE**

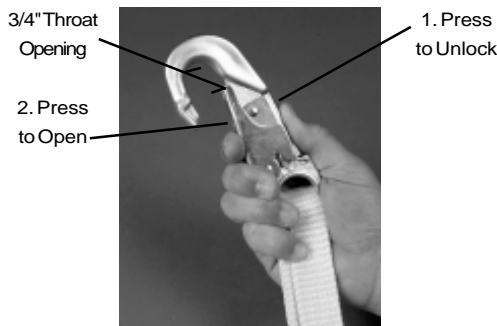
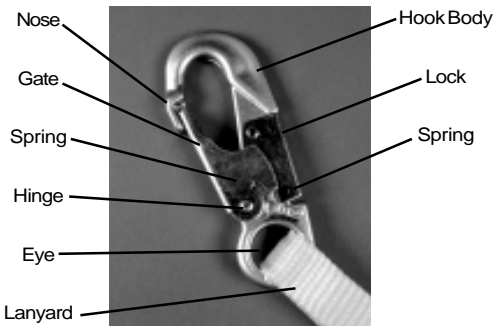


**4.1.9 DYNA BRAKE LANYARD WITH FIXED LENGTH WIRE ROPE**



**4.2 SELF-LOCKING SNAPHOOKS AND CARABINERS:** The snaphooks and carabiners on products identified in Table 1 are operable with one hand and automatically close and lock when released. There are two snaphooks on most models. The one at the shock absorber end is for connection to the back D-ring of the harness. The one at the opposite end is for connection to an anchorage connector for anchoring the system. Twin Dyna Brake models have three snaphooks.

**4.2.1 HL2000 SELF-LOCKING SNAPHOOK**

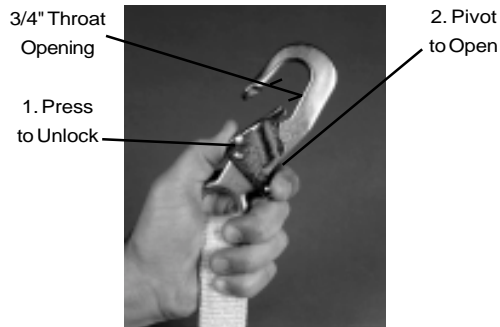
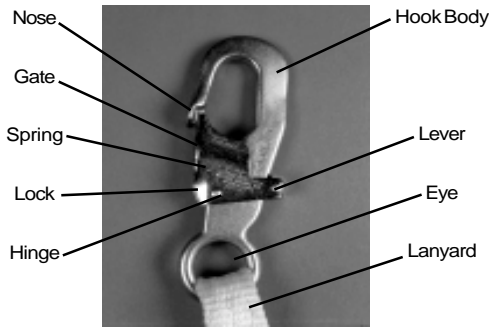


Release lock and gate to allow gate to close and lock.  
**ALWAYS CHECK.**



Snaphook  
(connect to anchorage connector)

**4.2.2 RL20 SELF-LOCKING SNAPHOOK**

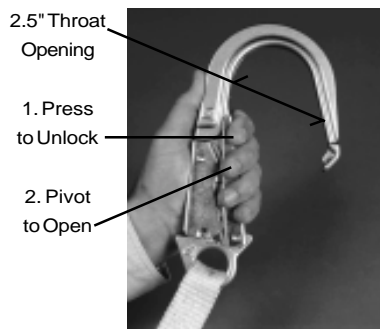
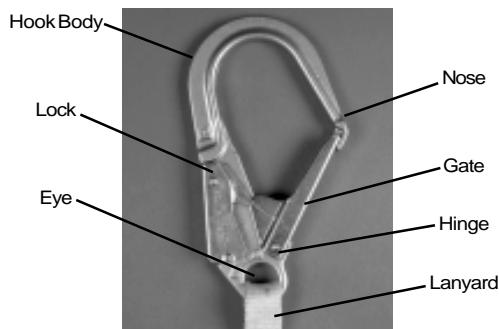


Release lock and gate to allow gate to close and lock. **ALWAYS CHECK.**



Snaphook (connect to anchorage connector)

**4.2.3 HL64 LARGE THROAT OPENING SNAPHOOK**



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



Snaphook (connect to anchorage connector)

**4.3 SEWN LOOP:** In some lanyard models, the connector element on the Dyna Brake is a sewn loop, 9 inch ( 23 cm). The loop stitching is protected by a vinyl sheath. Instructions on how to connect the sewn loop to the Fall arrest attachment element of the user's body support harness are given in section 8.3.

**4.4 ADJUSTER:** The adjuster on the lanyard (when present) is for adjusting the overall length of the lanyard.

**4.5 LANYARD ELEMENTS:** The lanyard elements (strap webbing, three-strand rope, or vinyl-coated wire rope) extend from and join the shock absorber to self-locking type snaps. Twin lanyard models have two lanyard legs connected to the Dyna Brake shock absorber and each lanyard leg terminates with a self-locking type snaphook or carabiner.

**4.6 SHOCK ABSORBER:** The Dyna Brake shock absorber consists of webbing that has been stitched together and folded up inside a fabric cover. When the shock absorber is placed in sufficient tension during fall arrest, stitching on the cover and/or the cover fabric is torn and the stitching on the webbing inside rips out until the fall is stopped. Fall energy is dissipated by the ripping of stitches. In the process, the shock absorber may elongate as much as 3.5 feet. The Dyna Brake has sewn loops at each end for connecting it to a snaphook or sewn loop at one end and to one or two lanyard legs at the other end. See sections 5.3.9, for a discussion of the evidence of fall arrest forces on the Dyna Brake, and; see sections 11 and 12 for inspection procedures.

## 5.0 SHOCK ABSORBING LANYARD SELECTION AND APPLICATIONS

- 5.1 PURPOSE OF ROSE DYNA BRAKE LANYARD:** The Dyna Brake shock absorbing lanyard is a component of a personal fall arrest system. The intended function of the shock absorbing lanyard is to stop a fall from heights, dissipate the energy built up during the fall, and suspend the fallen user until rescued. It is connected between the back D-ring of the harness and an overhead anchorage connector. Use of the Dyna Brake 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 Dyna Brake 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 Dyna Brake 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 Z359.1 and ANSI A10.14 standards for more information on full body harnesses and associated system components. In Canada, refer to provincial and federal regulations and to CSA Z259.1 and CSA Z259.11.
- 5.2 SIZING (LENGTH) OF SHOCK ABSORBING LANYARDS:** The overall length of the standard Dyna Brake lanyard (before elongation upon impact) is adjustable from 4.3 ft (1.3 m) to 6 ft (1.8 m). 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 Dyna Brake lanyard.
- 5.3.1 PHYSICAL LIMITATIONS:** The Dyna Brake lanyard is designed for use by one person with a combined total weight between 130 and 310 lbs (59 -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 Dyna Brake 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 Dyna Brake 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 Dyna Brake lanyard material is better for your specific conditions. When working in the presence of chemicals, more frequent inspection of the Dyna Brake lanyard is required.
- 5.3.3 HEAT:** Do not use Dyna Brake 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.
- 5.3.4 CORROSION:** Do not expose the Dyna Brake 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, drying of the Dyna Brake 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 Dyna Brake lanyard and on other components connected to it will conduct electric current. Maintain a safe working distance {preferably at least 10 ft (3 m)} from 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 Dyna Brake 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 Dyna Brake 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 Dyna Brake lanyard which has been subjected to the forces of arresting a fall must be immediately removed from service and marked as "UNUSABLE" until destroyed. If the Dyna Brake has been subjected to static forces in excess of 450 lbf, the stitches on the cover (the length of the body or at either end) will be missing or broken. The cover fabric will be opened and may also be torn. This physical evidence shall alert the user or the competent person inspector that the Dyna Brake shock absorber may have been exposed to the forces of arresting a fall and should be removed from service, labeled as "UNUSABLE" and submitted to the procedures explained in sections 11 and 12.

## 6.0 SYSTEMS REQUIREMENTS

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

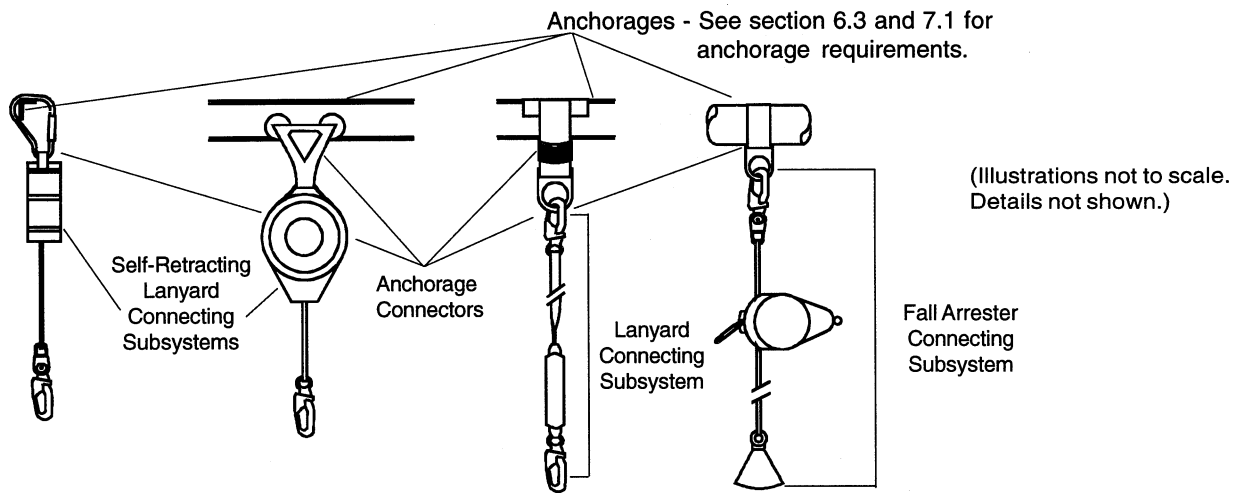
**6.1 SYSTEM TYPES:** Systems are classified according to their intended purposes. There are six classifications of systems which may be used individually or in some combinations. The six basic systems classifications are:

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

**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 Dyna Brake lanyards described by these instructions are lanyard connecting subsystems intended for use in fall arrest systems.**

**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, the Dyna Brake lanyards identified in Table 1 are generally not suited for use in fall arrester connecting subsystems.** Contact Rose for information on shock absorbing 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 Dyna Brake lanyard is 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 Dyna Brake lanyard is not suited for use in conjunction with and connected to the fall arrester of a permanent climbing protection system.**

**6.1.3 RESTRAINT SYSTEMS:** A restraint system is an assembly of components and subsystems, including the necessary connectors, used to:

(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.

(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. **The Dyna Brake lanyard should not be used as a positioning lanyard. It can be used for travel restriction, although a lanyard without shock absorber is preferred.**

**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 Dyna Brake lanyard should not be used for back-up fall arrests when lifting or lowering a person on a personnel-riding system.**

**6.1.5 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. **The Dyna Brake lanyard is generally not used in rescue systems.**

**6.1.6 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. **The Dyna Brake lanyard is generally not used in evacuation systems.**

**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 Dyna Brake lanyards are designed to be used with other Rose-approved products. Use of the Dyna Brake 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 Dyna Brake lanyard.



**6.2.2 COMPATIBILITY OF CONNECTORS:** Connectors, such as D-rings, snaphooks, and carabiners, must be rated at 5,000 lbf (22 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 or carabiner on the Dyna Brake lanyard is compatible with the D-ring on the harness or anchorage connector.

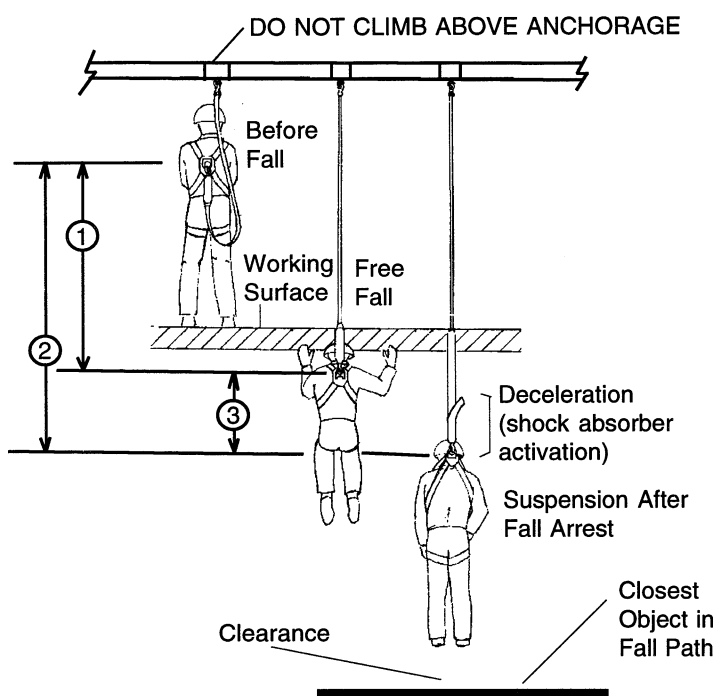
**6.3 ANCHORAGES AND ANCHORAGE CONNECTORS:** Anchorages for personal fall arrest systems must have a strength capable of supporting a static load, applied in directions permitted by the system, of at least: (a) 3,600 lbf (16 kN) when certification exists, or (b) 5,000 lbf (22.2 kN) in the absence of 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.

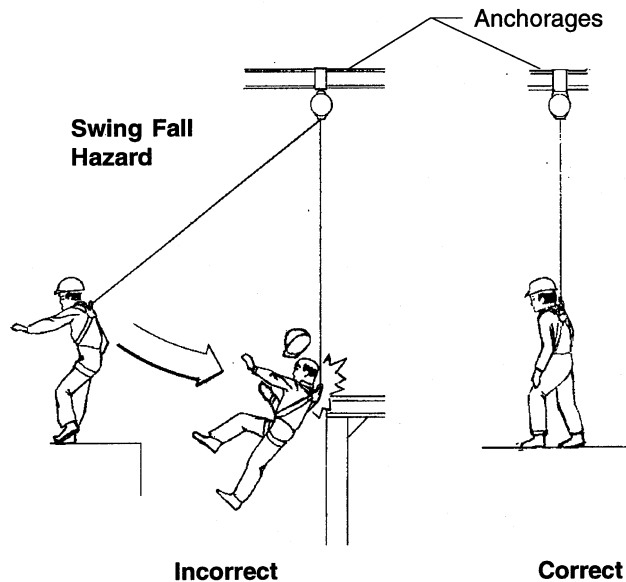
**7.2 FREE FALL DISTANCE, TOTAL FALL DISTANCE, AND SYSTEM ELONGATION:** Personal fall arrest systems must be selected and rigged to ensure that potential free fall distances will never exceed 6 ft (1.8 m) as required by OSHA and ANSI Z359.1. [In Canada, free fall distance is limited to 5 ft (1.5 m) by 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.



Swing fall hazards must be minimized by anchoring directly above the user's work space.

- 7.5 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.
- 7.6 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.
- 7.7 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 SHOCK ABSORBING LANYARD INSPECTION BEFORE EACH USE:** Inspect the Dyna Brake lanyard to verify that it is in serviceable condition. Examine every inch of the straps and shock absorber 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 Dyna Brake 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. Only self-closing, self-locking snaphooks and carabiners should be used to reduce the possibility of rollout when making connections. 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.

**8.3 DYNA BRAKE LANYARD WITH 9" LOOP:** The Dyna Brake lanyard with 9" loop is connected to the back D-ring of a Rose harness by the following steps:

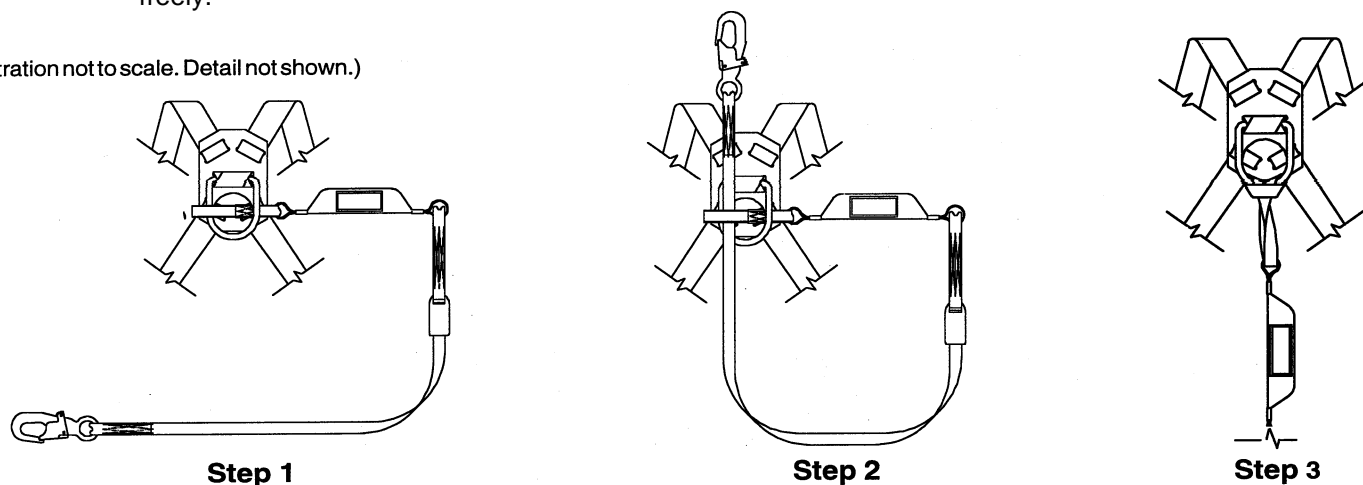
**Step 1:** Push the 9" webbed loop through the D-ring from the lower side.

**Step 2:** Loop the Dyna Brake through the 9" webbed loop strap.

**Step 3:** Pull the Dyna Brake entirely through the loop and cinch tight.

**Step 4:** Verify that the Dyna Brake lanyard is stable and is pulled completely through the 9" loop and will hang freely.

(Illustration not to scale. Detail not shown.)



**⚠ CAUTION**

Once the lanyard with loop is secured, do not attempt to attach any other connectors such as snaphooks or carabiners to the harness D-ring or to the lanyard loop due to the potential hazard of accidental disengagement ("roll-out").

**8.4 TWIN LANYARD:** The twin lanyard is designed to maintain continuous connection while climbing or moving laterally. Always connect the snaphook of the second leg of the lanyard to a suitable anchorage or anchorage connector before disconnecting the first leg of the lanyard. When working position has been reached and movement stops, one leg of the lanyard must be connected to a suitable anchorage. The other leg of the lanyard should be disconnected from the structure and clipped to a neutral attachment on the user's body support, i.e. corresponding side D-ring.

**9.0 CARE, MAINTENANCE AND STORAGE**

**9.1 CLEANING INSTRUCTIONS:** Clean the Dyna Brake lanyard with a solution of water and mild laundry detergent. Do not immerse shock absorber. 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 Dyna Brake 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 and carabiners may require periodic lubrication. Use a lightweight 8low 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 Dyna Brake 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 Dyna Brake lanyard. The Formal Inspection Grid must be punched with a date (month/year) within the last six months. If not, remove the Dyna Brake 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.

Leaf 4 Side 1

**WARNING**

**INSPECTION:** Inspect for malfunction, torn or open cover, 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 inspections, remove from use, label it "UNUSABLE" until reinspected, repaired or destroyed.

- User must inspect before each use.
- Labels are complete every 6 months.
- Punch inspection grid if product passes formal inspection.

FORMAL INSPECTION GRID												
J	F	I	M	A	M	J	J	A	S	O	N	D
98												
99												
00												
01												
02												

PUNCH GRID ON DATE OF FIRST USE

**PATENTS**

This product is covered by one or more of the following patents:

USA: 4,618,026; 4,434,536; and 4,626,726.  
 CANADA: 1,229,719  
 GERMANY: P 3370519.4  
 ECU: 010916 (applies to FRANCE, ITALY, UK).  
 AUSTRALIA: 567,694.

**Rose Manufacturing Company**  
 2250 S. Tejon Street  
 Englewood, Colorado, 80110, USA  
 Ph: 303-922-6246; Fax: 303-934-9960  
 Toll Free: 800-722-1231

Made in USA  
 PIN 622822

Leaf 4 Side 2

Leaf 3 Side 1

**WARNING**

**RIGGING AND USE:** Keep anchor directly overhead to reduce swing fall hazard.

- Keep lanyard as short as practical to minimize fall distance.
- Always check connections. This product's snaphook is the locking type meeting ANSI Z359.1. Snaphook 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 projects cannot unlock or open snap gate.
- To connect lanyard to fall arrest D-ring:
  1. Push 9" loop through the D-ring entirely through loop, and
  2. Pull lanyard with Dyna Brake cinch loop tight. Dyna Brake must hang freely.

**CAUTION**

**RIGGING AND USE:**

- Do not connect lanyards, snap-hooks or carabiners to each other.
- 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.

PIN 622943

Leaf 3 Side 2

Leaf 2 Side 1

**WARNING**

**SELECTION & USE:** Do not expose to chemicals and corrosives which could weaken parts. Consult manufacturer if in doubt.

- Do not expose to sharp edges, abrasive surfaces, sparks, flame and 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. A torn or open cover is evidence of exposure to a fall. See separate instructions. Remove from use and 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 and evacuation plans and means at hand to implement.

**CAUTION**

**SELECTION & 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:** Use with full body harness for fall arrest. Connect snaphook at shock absorber end to harness back (dorsal) D-ring and snaphook(s) at opposite end to anchorage connector.

- Anchorage must be at least 5,000 lb (22.2 kN) strength multiplied by number of persons attached to it.
- Space below user must be void of obstacles in potential fall path. Initial product length will increase by 3.5 ft (1.1 m) when shock absorber fully extends during fall arrest. See separate instructions for description of fall path and fall distance.

PIN 622821

Leaf 2 Side 2

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 be neither 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 this product and other products intended for use with it. **Failure to do so may result in serious injury or death.**

**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 reference standards. It is part of a fall arrest system. 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.

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

PIN 622786

Leaf 1 Side 2

Data Card Side 1

**Rose Lanyard with Integral Dyna Brake Shock Absorber**


Material: 1 in. polyester  
 Length: 5 ft (1.8 m)  
 Model: 601xxx

Capacity: 130 to 310 lbs (59 - 140 kg) (includes person + clothes + tools)  
 Free Fall Limit: 6 ft (1.8 m) ANSI Z359.1, OSHA; 5 ft (1.5 m) ANSI A10.14, CSA

Max. Elongation: 3.5 ft (1.1 m)  
 Min. Activation Force: 450 lb (2 kN)  
 Max. Arrest Force: 900 lb (4 kN)

Meets: OSHA Requirements; ANSI Z359.1; ANSI A10.14; Type 1, CSA Z259.1; CSA Z259.11

DATE MADE:  
 SERIAL NUMBER:



DO NOT REMOVE LABELS

**Note:** On harnesses sold in Canada, a French translation of the front side of this label appears in this space.

Data Card Side 2

## 11.0 INSPECTION BEFORE EACH USE

- 11.1 INSPECTION FREQUENCY:** The Dyna Brake 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 Dyna Brake 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 Dyna Brake 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 on page one (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 shock absorbing 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 the Dyna Brake and its cover, webbing (straps) and their stitching, and ropes.

- (a) Inspect the Dyna Brake cover to verify that both ends are sealed and binding tape with stitching is intact. Inspect the cover for cuts, tears, burns, alteration, broken or loose stitching. Inspect for signs of exposure to excessive heat, abrasion (wear) and chemical attack. In addition, inspect the webbing and stitching in the Dyna Brake in accordance with (b) below.
- (b) 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.
- (c) 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, carabiners, 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 carabiner function by cycling their 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 Dyna Brake 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 Dyna Brake lanyard from use and

mark it as "UNUSABLE" until destroyed. For final disposition, submit the Dyna Brake 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 Dyna Brake lanyard.**

## 12.0 FORMAL INSPECTION

- 12.1 FORMAL INSPECTION FREQUENCY:** The Dyna Brake 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/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 Dyna Brake 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 Dyna Brake 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 Dyna Brake lanyard part designated in the callouts on the DIAGRAM.

**DESCRIPTION** - Name of the Dyna Brake 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 Dyna Brake lanyard. The quantity of each Dyna Brake 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 Dyna Brake 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, Dyna Brake, 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 Dyna Brake 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 Dyna Brake 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 Dyna Brake 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 Dyna Brake 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, Dyna Brake, 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 Dyna Brake lanyard. If in step 5 it has been determined that the Dyna Brake 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 Dyna Brake lanyard is to be destroyed, returned to manufacturer/distributor, etc.

**Step 7:** If in step 5 it has been determined that the Dyna Brake 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 Dyna Brake 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><b>Disposition:</b></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><b>Criteria for disposition of "N" (Not acceptable):</b></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		
	Burns/heat exposure	S4	SN - (Stitching not acceptable)	
	Chemical exposure	S5		
	Other	S6		
	No visible change	S0		
Dyna Brake	Cut/torn/frayed	D1	DA - (Dyna Brake acceptable)	
	Abrasion/wear	D2		
	Partially missing/altered	D3	DN - (Dyna Brake not acceptable)	
	Burns/heat exposure	D4		
	Chemical exposure	D5		
	Cover opened	D6		
	Elongated	D7		
	Other	D8		
	No visible change	D0		
	Fibre rope	Cut/pulled/broken fibres		R1
Abrasion/wear/fuzziness		R2		
Partially missing/altered		R3		
Burns/heat exposure		R4		
Chemical exposure		R5		
Hockling/knotted		R6	RN - (Rope not acceptable)	
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		
	Chemical exposure	M5		
	Burrs/sharp edges	M6	MN - (Metallic not acceptable)	
	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	PN - (Plastic not acceptable)	
	Burns/heat exposure	P4		
	Chemical exposure	P5		
	Other	P6		
	No visible change	P0		



12.5 FORMAL INSPECTION LOG FOR ROSE DYNA BRAKE LANYARD

Model No.: 501222 Inspector: J. W. Doe  
 Serial No.: 012345 Inspection Date: 1/14/98  
 Date Made: 7/97 Disposition: N - See items 3 & 5, Destroy lanyard.

INSP. POINT	DESCRIPTION	QTY/L	COND. (a)	OVERALL ASSESS.(a)	COMMENTS
<b>FABRIC (FIBROUS) PARTS</b>					
<b>WEBBING (STRAPS)</b>					
1	Lanyard leg (single)	1	<i>W1</i>	<i>WA</i>	<i>Some wear - Minor.</i>
1	Lanyard legs (twin)	2	-----	-----	
1A	Sewn 9" loop	1	-----	-----	
<b>STITCHING</b>					
2	Lanyard leg (single, fxd)	2	<i>S0</i>	<i>SA</i>	
2	Lanyard leg (single, adj)	2	-----	-----	
2	Lanyard legs (twin)	4	-----	-----	
2A	9" Loop	1	-----	-----	
2B	9" Loop joint	1	-----	-----	
<b>DYNA BRAKE</b>					
3	Webbing, loop (single)	2	<i>D0</i>	<i>DA</i>	
3	Webbing, loop (twin)	3	<i>D0</i>	<i>DA</i>	<i>Cover &amp; stitches torn.</i>
4	Stitching, strap loops	2	<i>D0</i>	<i>DA</i>	
5	Stitching, cover	2	<i>D1</i>	<i>DN</i>	<i>Shock absorber was impacted.</i>
6	Binding Tape	2	<i>D0</i>	<i>DA</i>	
7	Cover	1	<i>D6</i>	<i>DN</i>	
<b>FIBRE ROPE</b>					
8	Lanyard leg	1	-----	-----	
9	Splices	2	-----	-----	
<b>METALLIC PARTS</b>					
10	Lanyard leg (wire rope)	1	-----	-----	
11	Snaphooks, single (b)	2	<i>M0</i>	<i>MA</i>	
11	Snaphooks, twin (b)	3	-----	-----	
12	Large-throat opening snaphook (twin)	2	-----	-----	
12	Large-throat opening snaphook	1	-----	-----	
13	Adjuster (single)	1	<i>M0</i>	<i>MA</i>	
13	Adjuster (twin)	2	-----	-----	
14	Swaged fitting	4	-----	-----	
15	Thimble	2	-----	-----	
16	Hog ring	2	-----	-----	
<b>PLASTIC PARTS</b>					
17	Labels	5	<i>P0</i>	<i>PA</i>	
18	Thimble	1	-----	-----	
19	Vinyl coating, wire rope	1	-----	-----	
20	Vinyl coating, 9" loop	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 4.2.2, 4.2.3 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.

## 12.5 FORMAL INSPECTION LOG FOR ROSE DYNA BRAKE LANYARD

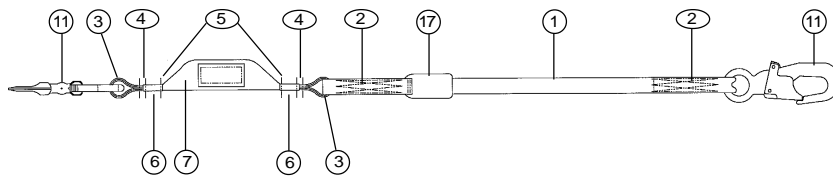
Model No.: \_\_\_\_\_ Inspector: \_\_\_\_\_  
 Serial No.: \_\_\_\_\_ Inspection Date: \_\_\_\_\_  
 Date Made: \_\_\_\_\_ Disposition: \_\_\_\_\_

INSP. POINT	DESCRIPTION	QTY/L	COND. (a)	OVERALL ASSESS.(a)	COMMENTS
<b>FABRIC (FIBROUS) PARTS</b>					
<b>WEBBING (STRAPS)</b>					
1	Lanyard leg (single)	1			
1	Lanyard legs (twin)	2			
1A	Sewn 9" loop	1			
<b>STITCHING</b>					
2	Lanyard leg (single, fxd)	2			
2	Lanyard leg (single, adj)	2			
2	Lanyard legs (twin)	4			
2A	9" Loop	1			
2B	9" Loop joint	1			
<b>DYNA BRAKE</b>					
3	Webbing, loop (single)	2			
3	Webbing, loop (twin)	3			
4	Stitching, strap loops	2			
5	Stitching, cover	2			
6	Binding Tape	2			
7	Cover	1			
<b>FIBRE ROPE</b>					
8	Lanyard leg	1			
9	Splices	2			
<b>METALLIC PARTS</b>					
10	Lanyard leg (wire rope)	1			
11	Snaphooks, single (b)	2			
11	Snaphooks, twin (b)	3			
12	Large-throat opening snaphook (twin)	2			
12	Large-throat opening snaphook	1			
13	Adjuster (single)	1			
13	Adjuster (twin)	2			
14	Swaged fitting	4			
15	Thimble	2			
16	Hog ring	2			
<b>PLASTIC PARTS</b>					
17	Labels	5			
18	Thimble	1			
19	Vinyl coating, wire rope	1			
20	Vinyl coating, 9" loop	1			

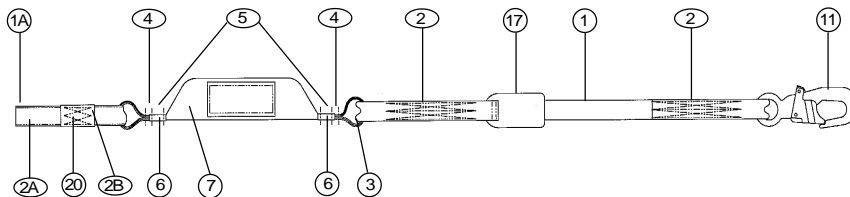
- (a) Optional simplified PASS/FAIL inspection format: Whenever an acceptable condition is found, the entry in the COND. and OVERALL ASSESS. columns may be left blank. Whenever a defective condition is found, enter "FAIL." The inspection may end upon detection of a single defective condition.
- (b) The function of snaphooks (and the parts thereof) must be carefully checked with reference to sections 4.2.2, 4.2.3 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 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP**

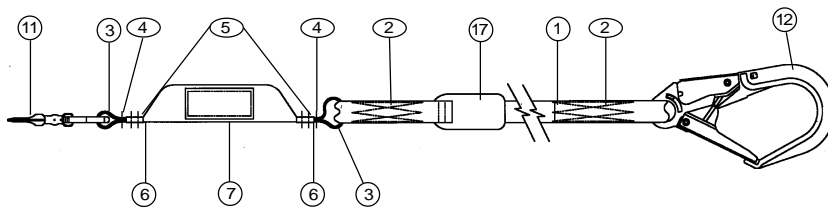


**12.6.2 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP AND 9" LOOP**

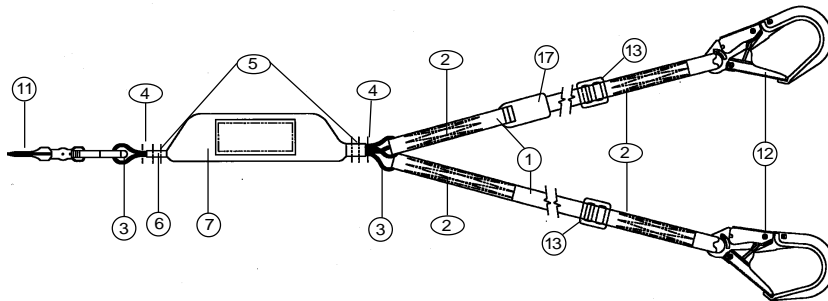


\* Twin DYNA BRAKE with fixed length strap and 9" loop not shown.

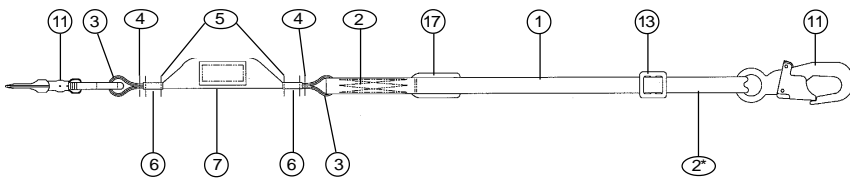
**12.6.3 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP AND LARGE THROAT OPENING SNAPHOOK**



**12.6.4 DYNA BRAKE LANYARD WITH FIXED LENGTH STRAP AND LARGE THROAT OPENING SNAPHOOK**

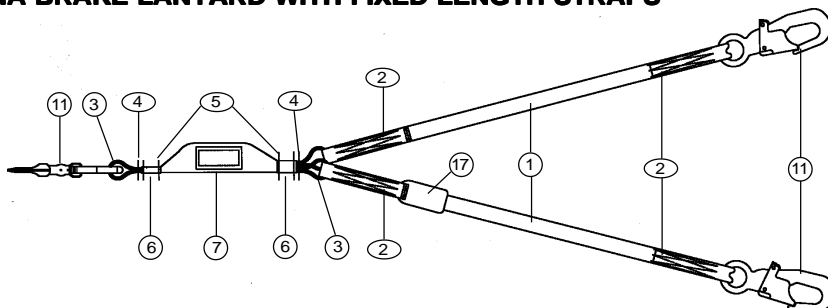


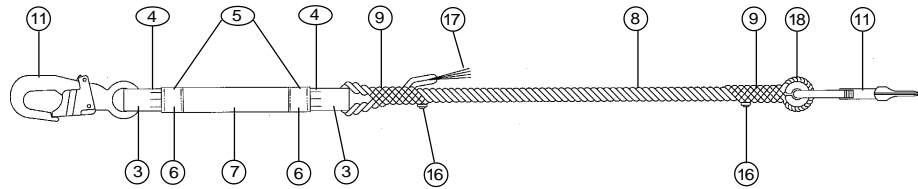
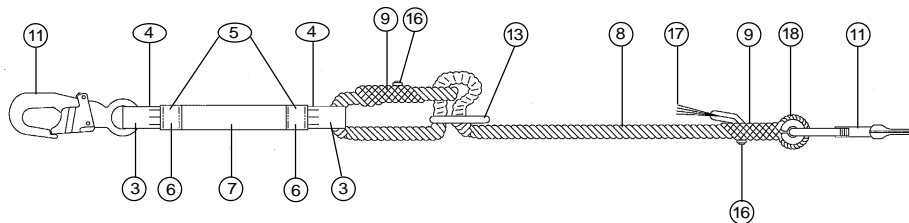
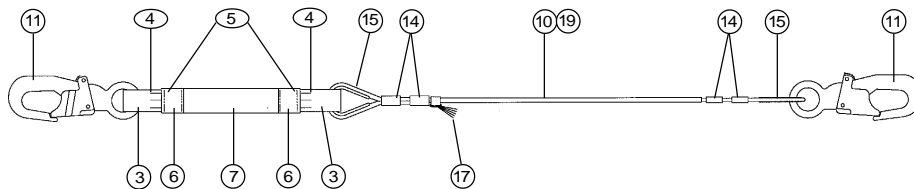
**12.6.5 DYNA BRAKE LANYARD WITH ADJUSTABLE LENGTH STRAP**



\* Opposite side not shown.

**12.6.6 TWIN DYNA BRAKE LANYARD WITH FIXED LENGTH STRAPS**



**12.6.7 DYNA BRAKE LANYARD WITH FIXED LENGTH ROPE****12.6.8 DYNA BRAKE LANYARD WITH ADJUSTABLE LENGTH ROPE****12.6.9 DYNA BRAKE LANYARD WITH 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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