MSA ROSE

MODEL NUMBER
FULL BODY STYLE

USER INSTRUCTIONS
ROSE PULLOVER™ HARNESS

⚠ 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, and 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 MODELS AND SPECIFICATIONS

TABLE 1. ROSE PULLOVER HARNESS MODELS COVERED BY THESE INSTRUCTIONS

Nylon	Poly	D-Ring Locations			Buckles & Adjusters (a)			Weight		System Usage
MODEL	MODEL	BACK	HIP	CHEST	SHOULDER	THIGH	CHEST	LBS	KG	CLASSES (B)
502700	502701	1	2	1	0	F	F	3.3	1.5	A, D, E, L, P
502715	502716	1	2	1	2	F	F	3.5	1.6	A, D, E, L, P
502717	502718	1	2	0	0	F	F	2.9	1.3	A, P
502720	502721	1	0	0	0	F	F	2.9	1.3	A
502722	502723	1	0	1	0	F	F	3.1	1.4	A, D, E, L
502726	502727	1	0	0	2	F	F	3.2	1.5	A, E
502733	502734	1	2	1	0	T	F	3.5	1.6	A, D, E, L, P
502736	502737	1	0	0	0	T	F	2.9	1.3	A
502738	502739	1	0	0	2	T	F	3.3	1.5	A, E
502740	502741	1	2	0	0	T	F	3.2	1.5	A, P
502743	502742	1	2	1	2	T	F	3.5	1.6	A, D, E, L, P
502744	502745	1	0	1	0	T	F	3.2	1.5	A, D, E, L
502761 (c)	502760	1	0	1	0	T	F	3.4	1.5	A, D, E, L
502732 (d)	N/A	1	2	1	0	T	F	3.5	1.6	A, D, E, L, P
501390 (e)	N/A	1	0	0	0	T	F	3.3	1.5	A
502800	502801	1	2	1	0	Q	F	3.2	1.5	A,D,E,L,P
502804 (c)	502805	1	0	1	0	Q	F	3.2	1.5	A,D,E,L
502806 (c)	502807	1	0	0	0	Q	F	3.0	1.4	A
502822	502823	1	0	1	0	Q	F	3.0	1.4	A,D,E,L
502824	502825	1	0	0	0	Q	F	2.7	1.2	A
502826	502827	1	2	0	0	Q	F	3.1	1.4	A,P

NOTES TO TABLE 1

(a) T = Tongue buckle, F = Friction buckle, Q = Qwik-Fit™

(b) A = Fall arrest, D = Controlled descent, E = Confined space entry and exit, L = Ladder climbing, P = Work positioning. Classes are described in section 4.1 and in the CSA Z259.10 standard.

(c) Models have tool belt support straps. See section 4.3.3.

(d) Model 502732 is for training purposes only. Request supplemental instructions P/N 622776.

(e) Model 501390 has no metal parts above the waist and includes an integral shock absorber. Request supplemental instructions P/N 622781.

(f) Not CSA listed.

Important: For custom versions of this product follow these user instructions and, if enclosed, refer to supplemental instructions for additional information to be followed when using this custom product.

1.1 SPECIFICATIONS - ROSE PULLOVER HARNESS

- All Rose Pullover harnesses identified in Table 1 meet ANSI Z359.1, ANSI A10.14, CSA Z259.10 standards (except as noted) and applicable OSHA regulations. These instructions, and markings borne by the harness, fulfill the instruction and marking requirements of those standards and regulations.
- All D-rings are zinc plated, forged alloy steel and 100% proof tested to 3,600 lbf (16 kN). Minimum breaking strength is 5,000 lbf (22.2 kN).
- All buckles and adjusters are forged or stamped alloy steel and zinc plated. Minimum breaking strength is 4,000 lbf (17.8 kN).
- Webbing is nylon or polyester, 1.75 in (44 mm) nominal width with minimum breaking strength of 6,000 lbf (26.7 kN). Webbing is color dyed for identification. Nylon harnesses have green webbing for the shoulder strap retainer, thigh straps and sub-pelvic strap. In polyester harnesses these are aqua. All other straps for both nylon and polyester models are orange.
- Free fall distance (limit) must not exceed 6 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 must not exceed 1,800 lbf (8 kN).
- Capacity is 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 Pullover harness to assure that harness 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 harness; (3) how to determine and acceptably limit free fall distance, total fall distance, and maximum arresting force; (4) how to don, adjust and doff the harness; (5) proper attachment locations on the harness 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 harness and associated equipment and of failure to follow instructions and training. If the harness 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 & CONTROL

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

⚠ CAUTION

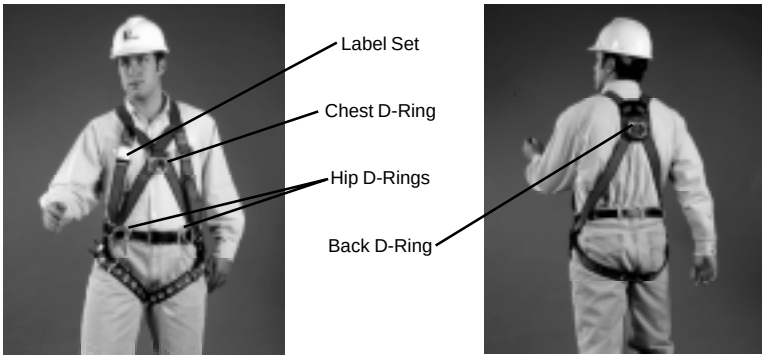
Prior to selecting a harness or other personal protective equipment, the user must make a workplace assessment of hazards and conditions where the equipment is required. Such assessment must, at a minimum, identify the presence of:

- Hot objects
- Climatic factors
- Moving equipment
- Moving materials
- Sharp objects
- Slippery surfaces
- Chemicals
- Sparks
- Weather factors
- Environmental contaminants
- Heat-producing operations
- Confined space hazards
- Abrasive surfaces
- Electrical hazards
- Flames
- Unstable/uneven surfaces
- Unguarded openings

Foreseeable changes in any of these conditions, taken individually or collectively, must be identified, evaluated and controlled. The materials and construction of the harness 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. An assembly connecting the harness to an anchorage must be selected which will satisfactorily limit total fall distance and allow for dynamic elongation and activation distance of the assembly. If the Pullover harness is to be used for confined space entry operations, the workplace assessment must comply with the requirements of OSHA regulation 29 CFR 1910.146 and ANSI Z117.1.

4.0 DESCRIPTION OF ROSE PULLOVER HARNESS



The intended purpose of each element in the Pullover harness is given in sections 4.1 through 4.4.

4.1 ATTACHMENT ELEMENTS (D-RINGS)

4.1.1 FALL ARREST ATTACHMENT (1)

Also called back D-ring. Present on all Pullover harnesses. For fall arrest [CSA class A]. Use only the back D-ring for connection to the other elements of a personal fall arrest system. The back D-ring may also be used as an attachment element for travel restriction.

4.1.2 FRONT ATTACHMENT (1, IF PRESENT)

Also called chest D-ring. For controlled descent [CSA class D], lifting and lowering (by hoisting) [CSA class E], and for ladder climbing [CSA class L]. The chest D-ring may also be used for rescue, retrieval and evacuation [CSA classes E and D].

4.1.3 HIP ATTACHMENTS (2, IF PRESENT)

Also called hip D-rings. For restraint (work positioning and travel restriction) [CSA class P]. Never use the hip D-rings for fall arrest or for climbing protection. Always use both hip D-rings together, never only one. When work positioning, use a separate fall arrest system attached to the back D-ring.

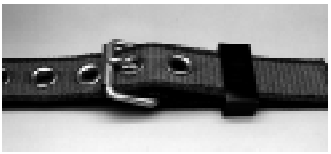
4.1.4 SHOULDER ATTACHMENTS (2, IF PRESENT)

Also called shoulder D-rings. For rescue and retrieval lifting and lowering (by hoisting) [CSA class E]. Never use the shoulder D-rings for fall arrest or climbing protection. Use both shoulder D-rings together, never only one.

4.2 BUCKLES AND ADJUSTERS

4.2.1 TONGUE BUCKLES (2, IF PRESENT)

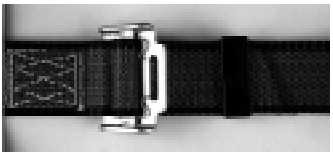
Used for closing the harness thigh straps around the user's thigh. The buckle tongue must pass through the grommet hole on the leg strap and the free end of strap must be tucked into the strap collar.



Tongue Buckle

4.2.2 FRICTION BUCKLES (1 OR 3)

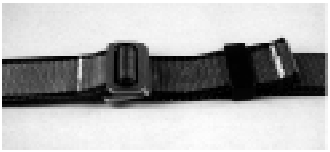
Used for securing the harness thigh straps around the user's thigh. A friction buckle adjuster (called the torso sizing adjuster) is also used in the harness shoulder strap to provide adjustment about the user's torso. In both cases, the free end of the strap must extend at least 3 inches (8 cm) beyond the buckle and be tucked into the strap collar.



Friction Buckle

4.2.3 QWIK-FIT™ BUCKLES (2, IF PRESENT)

Used for securing the harness thigh straps around the user's thighs. The free end of the strap must extend at least three inches (8 cm) beyond the buckle and be tucked into the strap collar.



Qwik-Fit Buckle

4.3 OTHER HARNESS PARTS

4.3.1 STRAP COLLARS (3)

Used for retaining the free ends of straps. Present on the thigh straps and left shoulder strap of all Pullover harnesses. Strap collars reduce the possibility of: (a) buckle loosening or release due to free strap ends and, (b) strap ends being caught in moving machinery.

4.3.2 OVAL RINGS (0, 1, 2 OR 3)

Used strictly to connect straps to each other at locations in some Pullover harness models where the D-ring is omitted by design. The back pad accessory described in section 4.4.1 is the only thing that is permissible to connect to an oval ring. **Never connect carabiners or snaphooks other than those of the back pad accessory (Model 507144) to the oval rings. They are only for the purpose of securing the harness straps to each other.**

4.3.3 TOOL BELT SUPPORT STRAPS (2, IF PRESENT)

Used for attachment of optional Tradesman's™ Tool Belt (Model 502099) and comfort pad (Model 507174).

4.4 HARNESS OPTIONAL ACCESSORIES

4.4.1 BACK PAD ACCESSORY

Model 507144. Snaps into back of D-ring frames or oval rings at hips and provides lower back support in positioning applications. Adjustable over wide range of waist sizes. See separate instructions P/N 622778.

4.4.2 COMFORT PAD ACCESSORY

Model 507147. Wide pads snap under shoulder straps and/or thigh straps, spread strap pressure on body, and reduce chafing. See separate instructions P/N 622779.

4.4.3 HARDWARE CUFF

Model 507158. Fits over chest D-ring and prevents direct hardware contact with objects about the user which could be blemished by contact . Not a dielectric. See separate instructions P/N 622780.

4.4.4 TRADESMAN'S™ TOOL BELT AND COMFORT PAD

Model 502099 belt and Model 507174 comfort pad incorporate hip D-rings for positioning and means for assembling the user's tool pouches to the belt. The belt/pad assembly has quick-fastening bayonet connectors to suspend or remove it from the back of the harness when the harness is requested with optional female connectors. See separate instructions P/N 622115.

5.0 HARNESS SELECTION AND APPLICATIONS

5.1 PURPOSE OF ROSE PULLOVER HARNESS

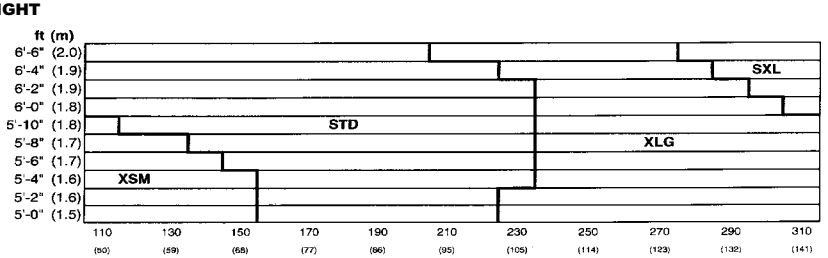
The Pullover harness (full body) is primarily a component of a personal fall arrest system. It may also be used for work positioning, travel restriction, ladder climbing, rescue, retrieval, evacuation and confined space entry/exit operations, depending on which attachment elements are included. See section 4.1. The harness straps are arranged to contain the torso and distribute the forces of fall arrest, restraint and suspension to the pelvis, thighs, chest and shoulders of the wearer.

Use of the Pullover harness must comply with these User Instructions and, further, is subject to approval under the user's safety rules and regulations, safety director, supervisor, or a qualified safety engineer. Be certain the selection of the Pullover harness 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 Pullover harness 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 Z259.10.

5.2 SIZING

Refer to Table 2 for selection of the proper size of harness for the user. If the proper harness size is selected, there will not be an excessive length of strap ends after harness adjustment, yet there will be enough strap length to permit adjustment for comfort and for donning the harness over winter clothing and heavy work clothing. Contact Rose if there is any question as to proper sizing.

TABLE 2



5.3 USAGE LIMITATIONS

The following applications limitations must be considered and planned for before using the Pullover harness.

5.3.1 PHYSICAL LIMITATIONS

The Pullover harness is designed for use by one person with a combined total weight no greater than 310 pounds (140 kg), including clothing, tools, and other user-borne objects. Persons with muscular, skeletal, or other physical disorders should consult a physician before using the harness. Pregnant women and minors must never use the harness. 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 this harness. Nylon is more resistant to attack by alkaline or neutral pH environments. Polyester is more resistant to attack by acids. If working in a chemically aggressive environment, consult Rose Manufacturing Company to determine which harness material is better for your specific conditions. When working in the presence of chemicals, more frequent inspection of the harness is required.

5.3.3 HEAT

Do not use harness in environments with temperatures greater than 185° F (85° C). Protect the harness when used near welding, metal cutting, or other heat producing activities. Sparks may damage the harness webbing and reduce its strength.

5.3.4 CORROSION

Do not expose harness to corrosive environments for prolonged periods. Organic substances and salt water are particularly corrosive to metal parts. When working in a corrosive environment, more frequent inspection, cleaning and drying of the harness 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 harness 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.

5.3.6 MOVING MACHINERY

When working near moving machinery parts (e.g. conveyors, rotating shafts, presses, etc.), make sure that harness straps are secured by the strap collars. Maintain a safe working distance from machinery which could entangle clothing, the harness, or other components connected to it.

5.3.7 SHARP EDGES AND ABRASIVE SURFACES

Do not expose harness straps 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 Pullover harness 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 Pullover harness 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 Pullover harness is one component of multi-component systems. Without the other necessary components, the harness 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 combinations. The six basic systems classifications are:

- Fall Arrest
- Personnel Riding
- Climbing Protection
- 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 the 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 harness and an anchorage or anchorage connector.

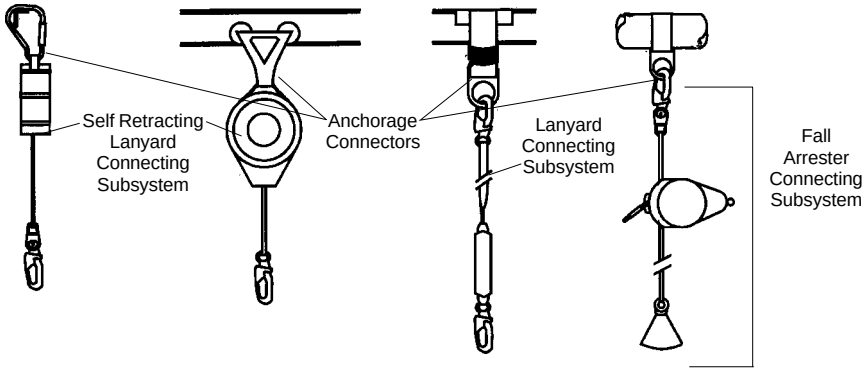
6.1.1.2 FALL ARRESTER CONNECTING SUBSYSTEM

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 (counter weight), 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.

ANCHORAGES

See sections 6.2.3 and 7.1 for anchorage requirements.

(Illustrations not to scale. Details not shown.)



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.

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™ systems. In those systems, a rigid rail is permanently attached to 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 Pullover harness and the fall arrester by use of a carabiner. Contact Rose for more information about Dyna-Glide climbing protection systems.

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 system is referred to as a travel restriction system.

A positioning system includes the Pullover 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 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 Pullover 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). The Pullover harness may be used in both of these different systems; however, the way it is used will differ. 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 must employ a fall arrest system of either the self-retracting lanyard type or the fall arrester (rope grab) type. It is permissible to use the Pullover harness as a suspension harness for making access to the work station if the access time is of very short duration and the use of a suspension seat is not possible. Do not use the Pullover harness for fully suspended work positioning. Contact Rose for separate instructions on the associated equipment used in personnel-riding systems.

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. When rescuing a person who is wearing the Pullover harness, it is generally best to connect the rescue line to the chest D-ring. Alternatively, it is acceptable (but less desirable) to connect the rescue line to both of the shoulder D-rings (if present on the model in use) using a "Y" retrieval lanyard. If the Pullover harness being used by the person being rescued has neither a chest D-ring nor shoulder D-rings, the back D-ring may be used as a last resort to connect the rescue line. Rose strongly recommends that the user select a Pullover harness with a chest D-ring to provide for rescue.

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 Pullover 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 instructyons 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. The Pullover harness has the necessary versatility to permit this. 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 Pullover harnesses are designed to be used with Rose approved components and connecting subsystems. Use of the Pullover harness 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). Rose Manufacturing

Company produces a complete line of connecting subsystems for each application. Contact Rose for further information. Refer to the manufacturer's instructions supplied with the component or connecting subsystem to determine suitability. For fall arrest applications using the Pullover harness, the maximum fall arrest force must not exceed 1,800 lbf (8 kN). Contact Rose Manufacturing Company with any questions regarding compatibility of equipment used with the Pullover harness.

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 and the D-ring on the harness or anchorage connector are compatible. Use only self-closing, self-locking snaphooks and carabiners (as defined and required by ANSI A10.14) with the Pullover harness.

6.2.3 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).

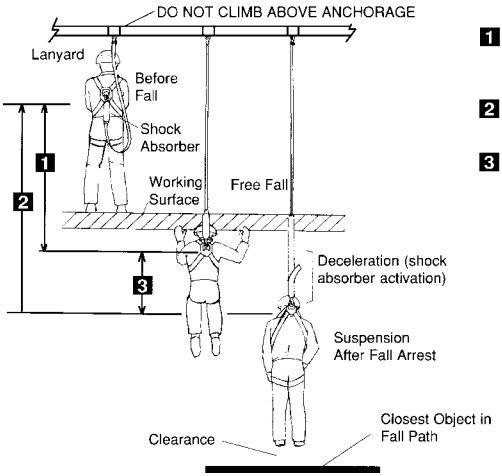
7.1 ANCHORAGE AND ANCHORAGE CONNECTOR SELECTION

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 6.2.3 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 clearance allowed.



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.)

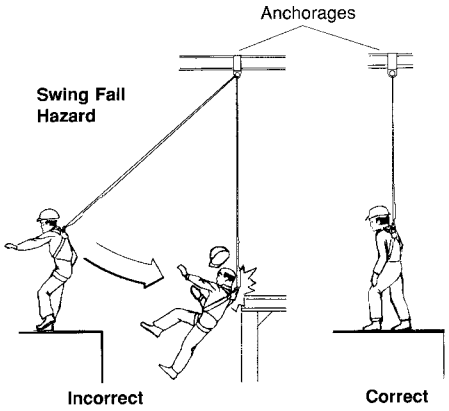
7.3 USER MOVEMENTS

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 SWING (PENDULUM) 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 HAZARD



Swing fall hazards must be minimized by anchoring directly above the uer'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 the risk to rescuers.

8.0 USAGE

8.1 HARNESS INSPECTION BEFORE EACH USE

Inspect the harness to verify that it is in serviceable condition. Examine every inch of the harness straps 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 harness if inspection reveals an unsafe condition.

8.2 DONNING AND DOFFING THE PULLOVER HARNESS

8.2.1 PUTTING ON (DONNING) AND ADJUSTING THE HARNESS

Begin by inspecting the harness as described in section 11.2. Then follow these steps to put the harness on and adjust it properly to the body:

STEP 1

Locate the back D-ring, held in position by the Back D-ring locator, and raise the harness. Adjust any straps that may be twisted before continuing.

Step 1

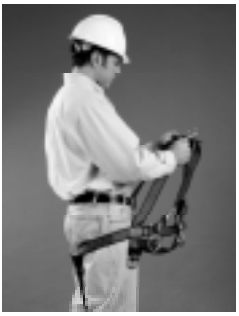
STEP 2

Step in over the green (aqua) seat strap.

Step 2

STEP 3

Pull the harness up the body.



Step 3

STEP 4

Insert forearms through the front and rear shoulder straps on both sides of the harness and grasp the back D-ring locator.

Step 4

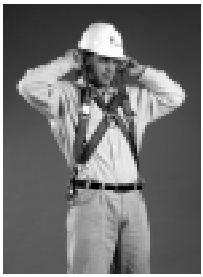
STEP 5

Pull the back D-ring over the head and the green (aqua) shoulder strap retainer under the chin.

Step 5

STEP 6

Let the harness settle onto the shoulders.



Step 6

STEP 7

Pull the harness down so that the shoulder strap retainer is positioned over the sternum (at chest level) and the seat strap is positioned at the crease of the buttocks/thighs.

Step 7

STEP 8

If the torso fit is too tight or too loose, and the seat strap does not snugly rest beneath the buttocks, lengthen or shorten the shoulder straps by threading webbing through the torso sizing adjusters as follows:

a. Take up or let out slack in the torso straps by feeding webbing to/from the right side of the body through the right hip hardware, then through the chest hardware and left hip hardware to the torso sizing adjuster on the left side of the chest.

Step 8a

b. Feed webbing through the torso sizing adjuster until you achieve a snug fit. Then pull on the free end of strap and take out the slack. Slide the strap collar to a position that captures the strap tip against the body. If there is any excess strap tip, tuck it beneath the left thighstrap.

Step 8b

THIGH STRAPS

STEP 9

If harness thigh straps have a tongue buckle, then:

a. Reach between legs, grasp one thigh strap, and bring it forward. Be sure to not twist the strap or cross the straps between the legs.

Step 9a

b. Thread the thigh strap through the buckle frame and tighten it until it is snug and neither too tight nor too loose.

Step 9b and 9c

c. Insert and seat buckle tongue securely in grommet hole.

d. Tuck strap end through the strap collar.

Step 9d

e. Repeat steps a, b, c, and d for the other thigh strap.

STEP 10

If harness thigh straps have a friction buckle, then:

a. This step is the same as step 9(a) for the tongue buckle thigh strap.

b. Thread the strap end through the back slot between the buckle frame and the knurled sliding bar.

Step 10b

c. Thread the strap end through the front slot between the buckle frame and the knurled sliding bar. Because the bar is spring-loaded, it will need to be pushed back in order to insert the strap end through the front slot. Pull the strap through the buckle and tighten it until it is snug and neither too tight nor too loose. Tuck the strap end through the strap collar and repeat the above steps for the other thigh strap.

Step 10c

STEP 11

If the harness thigh straps have a Qwik-Fit™ buckle, then:

a. Reach between the legs, grasp one thigh strap and bring it forward. Be sure to not twist the strap or cross the strap between the legs.

Step 11a

b. Pass the Qwik-Fit™ buckle through the retaining buckle by turning it at an angle and passing the buckle completely through the opening. Make sure the Qwik-Fit™ buckle is correctly seated in the receiving buckle.

Step 11b

c. Pull the strap through the buckle and tighten it until it is snug and neither too tight nor to loose. Repeat the above steps for the other thigh.

Step 11c

For a correct fit, the back D-ring should be centered between shoulder blades, chest D-ring (if present) should be centered on lower chest, shoulder D-rings (if present) should be located above shoulders, hip D-rings (if present) should be positioned on each side of hip with circular rings facing forward.

After the Pullover harness is properly fitted, the user may then connect to other components selected for the system. When making connections to the harness, follow the guideline in section 4 to select the proper D-ring for the task. When making connections to the anchorage, follow the guidelines in sections 5, 6 and 7.

8.2.2 TAKING OFF (DOFFING) THE HARNESS

To remove the harness, unbuckle the thigh straps, insert hands beneath the shoulder straps and lift the harness over the head.

Taking Off (Doffing) The Harness

After use, return the Pullover harness to the proper person and place for cleaning and storage as described in section 9.

8.3 MAKING PROPER CONNECTIONS

8.3.1 USE OF D-RINGS (ATTACHMENT ELEMENTS)

For general fall arrest use, connect to the D-ring on the back between the shoulders. For ladder climbing, it is permissible to attach to the front D-ring of the harness, provided the potential free fall is very short and footing can be easily regained. The front D-ring may also be used for positioning or restraint. Side D-rings (if present) are for positioning or restraint applications only, never for fall arrest. See section 4.

8.3.2 MAKING 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. Refer to Section 2 of these instructions.

9.0 CARE, MAINTENANCE AND STORAGE

9.1 CLEANING INSTRUCTIONS

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

9.2 MAINTENANCE AND SERVICE

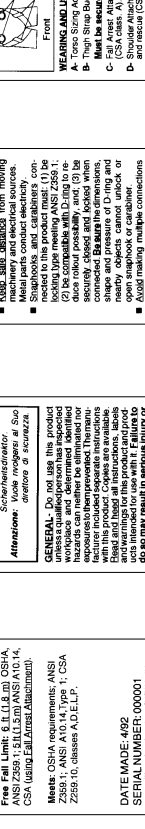
Equipment which is damaged or in need of maintenance must be tagged as "UNUSABLE" and removed from service. Corrective maintenance (other than cleaning) and repair, such as replacement of elements, must be performed by the Rose factory. Do not attempt field repairs.

9.3 STORAGE

Store the harness in a cool, dry and clean place out of direct sunlight. Avoid areas where heat, moisture, light, oil, and 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. dried and cleaned) 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 section 12.

10.0 MARKINGS AND LABELS

The following labels must be present, legible and securely attached to the harness. The Formal Inspection Grid must be punched with a date (month/year) within the last six months. If not, remove the harness 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.



Note
On harnesses sold in Canada, a French translation will appear on the front side of the label.

11.0 INSPECTION BEFORE EACH USE

11.1 INSPECTION FREQUENCY

The Pullover harness must be inspected by the user before each use. Additionally, the harness 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.

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

11.2 PROCEDURE FOR INSPECTION

Step 1: Inspect the harness labels to verify that they are present and legible. See section 4 for location of labels. See section 10 for the specific labels that should be present and the information contained on them. 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 harness from use and mark it as "UNUSABLE" until a Formal Inspection is performed by a competent person.

Step 2: Inspect all webbing (straps) and stitching for cuts, fraying, pulled or broken threads, abrasion, excessive wear, altered or missing straps, burns, and heat and chemical exposures.

Step 3: Inspect all metallic parts (i.e. D-rings, oval rings, buckles, adjusters and grommets) for deformation, fractures, cracks, corrosion, deep pitting, burrs, sharp edges, cuts, deep nicks, missing or loose parts, improper function, and evidence of excessive heat or chemical exposures.

Step 4: Inspect all plastic parts (i.e. back D-ring locator, strap collars, labels, tool belt support clips) for cut, broken, excessively worn, missing and loose parts. (Labels are to be additionally checked in accordance with Step 1 above.) Inspect for evidence of burns and excessive heat and chemical exposures.

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 system types.

11.3 CORRECTIVE ACTION

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

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

12.0 FORMAL INSPECTION

12.1 FORMAL INSPECTION FREQUENCY

The Pullover harness 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 harness 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 harness passes Formal Inspection, the competent person should punch the date (month / year) of Formal Inspection on the grid supplied with the labels on each harness. 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 harness 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. The described detailed inspection record keeping is needed in order to trace detected defects to their causes. A simplified alternative procedure is also explained below.

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 ("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 front and back view line drawing of the harness with numbered callouts of the parts. The numbers called out in the diagram correspond to those shown on the column titled "INSP. 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" (A) or "Not Acceptable" (N). The columns on the LOG are as follows:

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

DESCRIPTION
Name of the harness inspection point. There are three broad categories of inspection points, namely, fabric parts, metallic parts and plastic parts.

QTY/H
Quantity per harness. The quantity of each harness inspection point that must be inspected.

PTY
Priority. A Priority "1" indicates a critical part. If one or more not acceptable conditions are found by inspection of Priority 1 parts, the harness is not acceptable for use. A Priority "2" indicates a non-critical part. If three or more not acceptable conditions are found by inspection of Priority 2 parts, the harness is not acceptable for use.

COND.
Condition. The condition of the harness 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, 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 harness parts into four broad categories (i.e. webbing, stitching, metallic, plastic). For each of these categories, the formal inspector checks the harness 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 harness 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 harness label set. Record the inspector's name and inspection date.

Step 2: Arrange the harness 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 harness condition has materially changed since the last Formal Inspection, retrieve and review the prior Formal Inspection records for the specific harness.

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

Step 5: Determine whether the part (inspection point) is acceptable or not acceptable. If a Priority 1 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." For Priority 2 inspection points, count the number of defective conditions identified in the Condition column of the LOG. If there is a total of three or more defective conditions for Priority 2 inspection points the harness is not acceptable for further use.

Step 6: Determine disposition of the harness. If in step 5 it has been determined that the harness 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 harness is to be destroyed, returned to manufacturer/distributor, etc.

Step 7: If in step 5 it has been determined that the harness is acceptable for further use, enter "A" or "PASS" in the Disposition space on the LOG. Punch the Formal Inspection Grid on the appropriate harness label with the date (month/year) corresponding to the inspection date to indicate to harness 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 Abrasion/wear Partially missing/altered Burns/heat exposure Chemical exposure Other No visible change	W1 W2 W3 W4 W5 W6 W0	WA (Webbing acceptable) WN (Webbing not acceptable)	Disposition A – Acceptable N – Not Acceptable Enter "A" (or "Pass") or "N" (or "Fail") in "Disposition" blank on Formal Inspection Log. **Criteria for disposition of "N" (Not Acceptable"):** 1. If there is one or more Overall Assesment Codes of "N" type (ie: WN, SN, MN, PN) on a Prioity 1 item. or 2. If there are three or more Overall Assesment Codes of "N" type on a Pirority 2 item.
Stitching	Cut/pulled/loose thread Abrasion/wear Partially missing/altered Burns/heat exposure Chemical exposure Other No visible change	S1 S2 S3 S4 S5 S6 S0	SA (Stitching acceptable) SN (Stitching not acceptable)	
Metallic	Deformed/fractured Corroded/deep pits Missing/loose Heat exposure Chemical exposure Burrs/sharp edges Cuts/deep nicks Malfunction Other No visible change	M1 M2 M3 M4 M5 M6 M7 M8 M9 M0	MA(Metallic acceptable) MN (Metallic not acceptable)	
Plastic	Cut/broken Wear damage Missing/loose Burns/heat exposure Chemical exposure Other No visible change	P1 P2 P3 P4 P5 P6 P0	PA (Plastic acceptable) PN (Plastic not acceptable)	

12.5 FORMAL INSPECTION LOG

Model No. 502734 Inspector J.W. Doe

Serial No. 123456 Inspection Date 9/2/98

Date Made 5/98 Disposition Fail, see item 12
harness experienced loading

INSP. POINT	DESCRIPTION	QTY / H	PTY	COND. (B)	OVERALL ASSESSMENT (B)	COMMENTS
	FABRIC (FIBROUS) PARTS					
	WEBBING (STRAPS)					
1	Shoulder	2	1	W6	WA	stains, no damage
2	Shoulder strap retainer	1	1	W0	WA	
3	Shoulder ring strap	2	1	—	—	
4	Thigh	2	1	W0	WA	
5	Sub Pelvic	1	1	W6	WA	some minor wear
6	Tool belt support (a)	2	2	—	—	
	STITCHING					
7	Shoulder ring straps	4	1	—	—	
8	Shoulder strap tips	1	1	S0	SA	
9	Shoulder strap retainer	2	1	S6	SA	stains, no damage
10	Shoulder strap reinforce	2	1	S0	SA	
11	Buckle strap	2	1	S0	SA	
12	Thigh strap	2	1	S0	SA	some wear, minor
13	Thigh strap edges	4	2	S0	SA	
14	Sub-pelvic strap	4	1	S0	SA	
	METALLIC PARTS					
15	D-ring, back	1	1	M0	MA	
16	D-rings, hip	2	1	M0	MA	
17	Chest	1	1	M0	MA	
18	Shoulder	2	1	—	—	
19	Adjuster, torso sizing	1	1	M0	MA	
20	Buckle, tongue	2	1	M0	MA	
21	Buckle, friction	2	1	—	—	
22	Buckle, Qwik-Fit™	2	1	—	—	
23	Grommets, thigh strap	16	1	M0	MA	
	PLASTIC PARTS					
24	Back D-ring locater pad	1	1	P1	PN	Fail, back D impacted
25	Strap collar	3	1	P0	PA	
26	Labels	1	1	P0	PA	
27	Tool belt support clips	2	2	—	—	

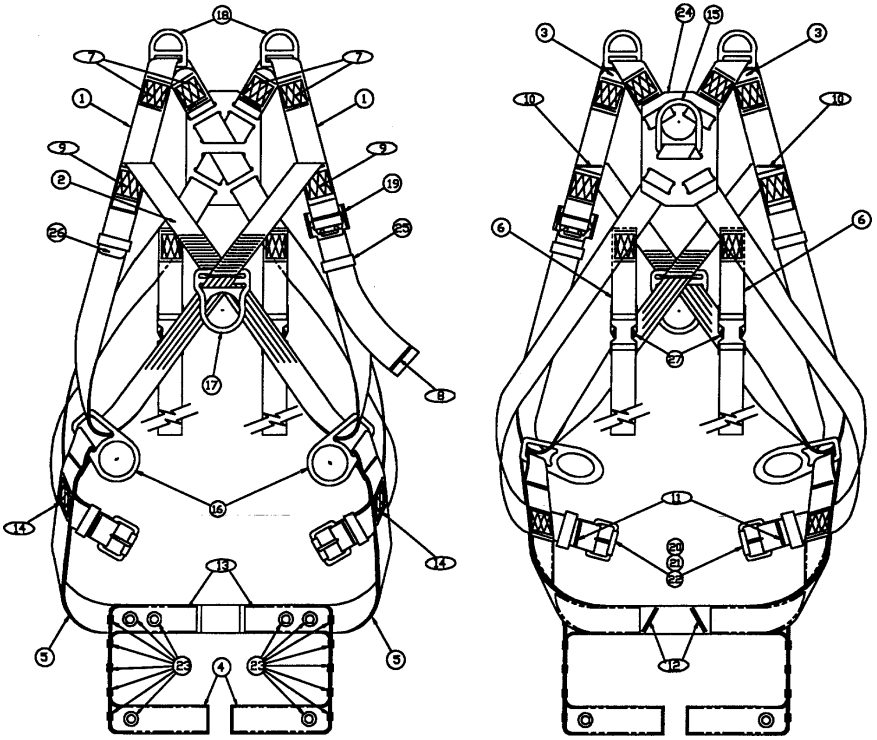
(a) Optional item.

(b) Optional simplified PASS/FAIL inspection format: When an acceptable condition is found, the entry in the COND. and OVERALL ASSESS. columns may be left blank. When a defective condition is found, enter "FAIL". The inspection may end upon detection of a single Priority 1 defect or three priority 2 defects.

(c) Blank copies of the LOG are available from Rose Manufacturing Company. Call Toll Free (800) 722-1231.

12.6 FORMAL INSPECTION DIAGRAM

Unless otherwise noted below, the above circled inspection points apply to all Pullover harnesses. Optional tool belt, comfort pads, back pad and hardware cuff are not shown.



INSPECTION POINT	NOTE
6,18, 27	Not present on some harness models
3, 7	Not present on some harness models without shoulder D-rings
16, 17	When hip or chest D-rings are not present, oval rings exist in their places
20, 21, 22	Harness models may have either tongue, friction or Qwik-Fit™ buckles
23	Grommet quantity 16 is for all sizes except SXL (which has 24 grommets)
26	Information on label sets may differ between harness models

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).

ROSE MANUFACTURING COMPANY ■ 2250 SOUTH TEJON STREET

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U.S. patents and foreign patents cover various aspects of this product. U.S.A. Patent 4,712,513; Canada Patent 1,257,573; Germany Patent G85 11 916.4; EPO Patent 200077 (applies to Belgium, France, Italy, Luxembourg, Switzerland, Netherlands, UK).

