



User Instructions
 ManSafe Free Standing Constant Force Post with
 MSA Horizontal Lifeline Systems for Fall Arrest

WARNING!

National standards and state, provincial and federal laws require the user to be trained before using the products described in this document. Use these instructions together with the instructions provided with each product as part of a user safety program that is appropriate for the user's occupation. These instructions, along with the instructions provided with each component in the system, must be provided to users before use of the system 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 system 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

This User Instruction describes how to combine the ManSafe Free Standing Constant Force Posts for use as end anchors for compatible MSA horizontal lifeline products. The following product models are covered in this User Instruction:

Table 1: MSA Models Covered By These Instructions

Description	MSA Model Number	Span Length	Capacity*	Material of Construction	Approximate Weight (each)
ManSafe Free Standing Constant Force Post	10055719	N/A	1 worker (310 lb 140 kg)	steel & stainless steel	880 lb (400 kg)
MSA Sure-Line™ Cable Horizontal Lifeline	SHL2009000	up to 60 ft (18 m) lengths	1 worker 310 lb (140 kg)	galvanized steel lifeline	up to 95 lb (70 kg) depending on length
MSA Sure-Line™ Synthetic Horizontal Lifeline	SHL1009060	up to 60 ft (18 m) lengths	1 worker 310 lb (140 kg)	nylon kernmantle rope lifeline	up to 20 lb (10 kg) depending on length
MSA Dyna-Line™ Synthetic Horizontal Lifeline	1001350 1001351	up to 60 ft (18 m) lengths	1 worker 310 lb (140 kg)	polyester braided rope lifeline	up to 15 lb (8 kg) depending on length

* Limit to one worker on the system when used together with ManSafe Free Standing Constant Force Post anchors

1.1 SPECIFICATIONS and LIMITATIONS:

- When used together as a complete system for fall arrest in accordance with these User Instructions, the ManSafe Free Standing Constant Force Posts and compatible MSA horizontal lifeline meet the requirements of ANSI Z359.6, "Specifications & Design Requirements for Active Fall Protection Systems," CSA Z259.16, "Design of Active Fall Protection Systems," and US Federal OSHA regulations per 29 CFR Parts 1910 and 1926.

- The horizontal lifeline system must be limited for use by one worker with a combined weight, including clothing, tools and other user-borne objects up to 310 pounds (140 kg). Forces generated by the horizontal lifeline system to the end-anchors must be limited to a maximum of 2,500 pounds force (11 kN).
- The attached worker must be equipped with a compatible personal fall arrest system which limits the maximum input load to the horizontal lifeline to 900 pounds (4 kN) or less. Refer to section 2.4 for the requirements of a compatible personal fall arrest system.
- The ManSafe Free Standing Constant Force Posts each exert a static load of 78 pounds per square inch (5.44 kgf/cm²) on the anchor surface.
- Length of the horizontal lifeline system must be limited to a maximum of 60 ft (18 m) in a single span. The use of intermediate supports is not recommended.
- Provide for adequate clearance in the path of a potential fall. Clearance requirements for the horizontal lifeline systems are given in section 5.1.
- The ManSafe Free Standing Constant Force Posts should not be used together with any other MSA horizontal lifeline products besides those listed in these User Instructions.
- The combined horizontal lifeline system is intended to be erected for temporary use. The ManSafe Free Standing Constant Force Post anchor devices are mobile anchors which are not permanently fixed to the anchor structure. The complete system is subject to movement which could alter the performance of the fall protection system. For this reason, the system should not remain in place for prolonged periods of time when changes in installation conditions could occur. The complete system must be inspected before each use and at regular intervals by a qualified or competent person. Refer to section 9.
- Before the installation and use of the combined free standing anchors and horizontal lifeline system, consult the user instructions provided with the ManSafe Free Standing Constant Force Post and MSA components of this system. The reference materials are listed as follows: ManSafe Free Standing Constant Force Post, Installation and User Instructions, Datasheet No. 65640-99; MSA Sure-Line Cable Horizontal Lifeline User Instructions, Doc SHLL002; MSA Sure-Line Temporary Synthetic Horizontal Lifeline User Instructions, Doc SHLL001; MSA Dyna-Line Horizontal Lifeline User Instructions, P/N 10013474.

WARNING!

All horizontal lifeline systems must be designed, installed and used under the supervision of a qualified person, in accordance with US Federal OSHA regulations and the requirements of legislative authorities in your jurisdiction. Misuse can result in serious injury or death.

2.0 FALL PROTECTION SYSTEM DESCRIPTION & COMPONENTS

The combined horizontal lifeline and mobile anchor device fall protection system covered by this User Instruction consists of the following major elements:

- A suitable anchor surface, such as a flat roof, capable of supporting the static and dynamic loads imposed by the fall protection system,
- Two (2) ManSafe Free Standing Constant Force Posts, each loaded to a weight of 880 pounds (400 kg), serving as end-anchors for an MSA horizontal lifeline system
- One (1) compatible MSA horizontal lifeline system rigged to the end-anchors, in a single, continuous span up to 60 ft (18 m) in length
- A compatible personal fall arrest system connecting one worker to the horizontal lifeline.

2.1 Anchor Surface Description

The anchor surface for the combined horizontal lifeline system must meet the requirements for use with the ManSafe Free Standing Constant Force Post, as described in the product user instructions (Datasheet 65640-99). Selection of an appropriate anchor surface must be performed by, or under the supervision of, a qualified person as required in OSHA regulation. The surface must be nominally flat

with a maximum slope of 5 degrees. The ManSafe Free Standing Constant Force Post end-anchors are mobile ballast type anchors which rely on frictional resistance between the base of the anchors and the anchor surface on which they rest. The anchor surface must be clean and free of loose stone chips or other debris which could reduce frictional resistance. The anchor surface must also be free of contaminants such as oil, grease, standing water or algae growth. The anchor device must never be used during periods when frost, ice or snow is present on the anchor surface or when freezing conditions are imminent.

2.2 ManSafe Free Standing Constant Force Post Used as Horizontal Lifeline End-Anchor Device

The anchor device may be supplied in component part form and may require assembly before the device can be placed into service. Follow the instructions provided with the product to complete the assembly. The ManSafe Free Standing Constant Force Post recommended for use with MSA horizontal lifeline systems includes a total of 16 standard galvanized segments, with a total weight of 880 pounds (400 kg) for each anchor device. At the top of each post there must be an integral D-ring for connection of the compatible MSA horizontal lifeline connector.

2.3 MSA Horizontal Lifeline Systems for Use with ManSafe Free Standing Constant Force Post End-Anchor Devices

The choice of which MSA horizontal lifeline system is selected for use with the ManSafe Free Standing Constant Force Post mobile anchor devices will depend on the site application. Selection must be approved by the qualified person responsible for the design, installation and use of the complete fall protection system. Any of the MSA horizontal lifeline systems described in these User Instructions will be compatible with the ManSafe Free Standing Constant Force Post. When rigged and used according to the manufacturer's instructions, the MSA horizontal lifeline systems will limit forces to less than 2,500 pounds force (11 kN). Connecting components, i.e. carabiners or snaphooks, supplied with the MSA lifelines are compatible in size, shape and strength for use with the connecting D-ring on the ManSafe post.

2.4 Personal Fall Arrest System for Use with the MSA Horizontal Lifeline System and ManSafe End-Anchor Devices

The rigging and use of the combined horizontal lifeline system and mobile anchor devices presents special conditions which must be addressed by the personal fall protection system. Since the mounting location of the horizontal lifeline will be near foot level, approximately four feet below the fall arrest attachment element on the worker's full body harness, the personal fall arrest system must take into account the potential free-fall distance created by this arrangement. A further consideration is the possible exposure of the personal fall arrest system to a fall over an exposed edge or unguarded opening. To provide the necessary protection to the attached worker and to limit input loads to the horizontal lifeline system in the event of an accidental fall, the following components of a personal fall arrest system are advised:

- Full body harness with back D-ring fall arrest attachment element: MSA EvoTech™, TechnaCurv™, Workman™ or equivalent body support harness meeting the requirements of ANSI Z359.1-2007,
- Supplemental personal energy absorber: MSA Sure-Stop™ or equivalent energy absorber which limits fall arrest forces to 900 pounds (4 kN) and maximum deployment distance to 3.5 feet (1.1 m) or less and meets the requirements of ANSI Z359.11,
- Fast-acting fall limiter device with synthetic lifeline: MSA Workman PFL with synthetic lifeline, Aptura LT30, or DynaLock 20 ft with synthetic line.
- Carabiner connector with self-closing, self-locking gate and a minimum breaking strength of 5,000 lbf (22.2 kN) meeting ANSI Z359.12: MSA model SRCC413 or equivalent.

When feasible, the personal energy absorber should be attached integrally to the harness fall arrest attachment element. The other end of the personal energy absorber is connected to the lifeline of the fall

limiter device, which in turn is connected to the horizontal lifeline by means of a compatible carabiner connector.

3.0 FALL PROTECTION SYSTEM SELECTION AND APPLICATIONS

3.1 Purpose of the System

The horizontal lifeline with Constant Force Post end-anchors is a temporary system that mounts to a suitable working surface without the need for engineered anchorages. The system covered in these User Instructions provides fall protection for one worker while moving along the span of the horizontal lifeline. The system is designed for mobility and simple installation at temporary work locations without the use of special tools.

3.2 Limitations of Use

The fall protection system as described in these User Instructions is intended for use in fall arrest. Typical installations will include mounting to a suitable, flat roof structure where the attached worker is exposed to a fall hazard over an exposed roof edge or parapet, or in proximity to an unguarded roof opening. Deviations from the rigging and use limitations of these systems must not be attempted, nor should additional equipment be incorporated into the system, without the express written approval of MSA.

The horizontal lifeline with Constant Force Post end-anchors can be configured as a restraint system rated for two persons. Care must be taken to account for the stretch in the horizontal lifeline as well as the full length of available restraint line. Sufficient distance must be maintained to prevent the users from being able to reach any edge or opening.

WARNING!

No substitutions or replacements to the manufacturers' approved components are advised; alteration of components will void the manufacturers' warranty and may result in serious injury or death in the event of a fall.

The fall protection system is subject to the same physical and other limitations as those enumerated in the User Instructions provided with the systems components. These include, but are not limited to: chemical hazards, heat exposure, corrosion, electrical hazards, sharp edges and abrasive surfaces, wear and deterioration, impact forces and the hazards of moving machinery. Refer to the referenced User Instructions for further detail regarding these hazards.

4.0 SYSTEM REQUIREMENTS

4.1 Anchor Structure

A typical anchor structure is a flat roof or other suitable working surface with a slope of less than 5 degrees and sufficient strength to resist loads imposed by the fall protection system. Static load from the ManSafe Free Standing Constant Force Post is 880 lb (400 kg) or approximately 78 lb/in² (5.44 kgf/cm²) over an area of approximately 9 ft² (1 m²) beneath each end-anchor. This load must be considered by a qualified person in addition to other loads imposed on the structure. In the event of a fall, loading will be limited by the integral energy absorber contained in the ManSafe Free Constant Force Post end-anchors. The maximum load transmitted to the anchor structure in a fall will be less than 2,500 pounds (11 kN). Fall arrest loads are impulse loads of approximately 300 ms duration. The loads imparted by fall arrest will be largely dissipated in frictional resistance along a path of horizontal movement in the direction of the fall up to 2.5 ft (0.7 m) from the initial position of the anchor devices.

4.2 Compatibility of Components

The components which make up the fall protection system described in these User Instructions is strictly limited to the ManSafe and MSA components described in sections 2.2, 2.3 and 2.4, above. Use of alternative MSA components or products by other manufacturers that are not approved in writing by MSA may adversely affect the functional compatibility between system parts and the safety and reliability of the system. Contact MSA with any questions regarding compatibility of equipment before putting the equipment into service.

5.0 PLANNING THE USE OF SYSTEMS

Perform a hazard identification and evaluation according to the instructions provided with the MSA horizontal lifeline system and complying with worksite safety practices. Consider all 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 application, the work, workplace hazards and the environment. Consider the following points when planning the system(s):

5.1 Clearance Required Below the Horizontal Lifeline

Allow for sufficient clearance in the path of a potential fall. Refer to Table 2 in this section to determine the minimum clearance required for a given span distance using one of three compatible MSA horizontal lifeline systems. Clearance requirements assume the following conditions are met:

- The maximum free fall distance permitted by the fall arrest system is 6 ft (1.8 m) or less,
- the worker is equipped with an MSA personal fall arrest system as described in section 2.4 of these User Instructions
- The lifeline has been properly rigged according to these instructions and the instructions provided with the product and the anchor devices have been located at least 10 ft (3 m) from the nearest exposed edge or unguarded opening

The required clearance in Table 2 includes the following factors involved in determining total fall clearance.

- Free fall distance maximum when rigged with a personal fall limiter device
- Vertical displacement of the horizontal lifeline resulting from line stretch, deployment of the in-line Constant Force energy absorber as well as potential movement of the anchorage devices along the anchor surface (varies with each system, based on manufacturer's test results)
- Deployment of the personal fall limiter
- Deployment of the supplemental personal energy absorber maximum
- Harness effect maximum
- Safety margin minimum

Table 2

Table 2 provides clearance required below the path of worker movement, measured from the working surface to the closest obstruction in the path of a fall.

<u>Horizontal Lifeline System</u>	<u>Span Length (ft)</u>	<u>Required Clearance (ft)</u>
Sure-Line Cable	1 - 10	20
	11 - 20	21

21 - 30	22
31 - 40	24
41 - 50	26
51 - 60	28

Horizontal Lifeline System	Span Length (ft)	Required Clearance (ft)
Sure-Line Synthetic	1 - 10	24
	11 - 20	25
	21 - 30	26
	31 - 40	27
	41 - 50	29
	51 - 60	31

Horizontal Lifeline System	Span Length (ft)	Required Clearance (ft)
Dyna-Line Synthetic	1 - 10	22
	11 - 20	23
	21 - 30	24
	31 - 40	26
	41 - 50	28
	51 - 60	30

To apply the information in Table 2, determine which MSA horizontal lifeline system will be rigged for your application. Next, determine the length of the lifeline to be used, measured from bearing-point to bearing-point along the horizontal lifeline. Look up the corresponding Span Length in the Table. Read across the Table to find the minimum required clearance for your installation. This is the clearance required to the nearest object in the path of a potential fall, measure from the working surface to the top of the obstruction.

CAUTION!

Use the required clearance in these instructions as a guideline. Interpretation of the information contained in this section must be left to the qualified or competent person, one who has specific knowledge of the worksite conditions and the equipment to be used. When in doubt, consult your resident qualified or competent person before rigging this horizontal lifeline system. Contact MSA for additional information or when conditions at your site do not match the requirements in these instructions.

5.2 Pendulum (Swing) Falls

Swing falls can occur when the horizontal lifeline is not located directly above the path of worker movement. The force of striking an object in a swinging motion can cause serious injury. Minimize swing fall hazards by ensuring that no obstructions are present along the path of a potential fall in the horizontal direction (either side of the fall path) to a distance equal to the clearance required in the vertical direction.

5.3 Hazard Identification in the Workplace

All hazards of the type set forth in section 3.2 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.

5.4 Rescue and Evacuation

The user must have a rescue plan and 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 is 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 means to implement it must always be in place, it is a good idea to provide a 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.

CAUTION!

The horizontal lifeline and anchor devices deployed in arresting a fall are not suitable anchors for rescue purposes. Rescue planning must include provisions for a separate, independent anchor structure for attaching rescue personnel exposed to a fall hazard during rescue operations.

5.5 Training

Only authorized users who have been instructed in the proper use, inspection and maintenance of the horizontal lifeline and anchor device system described in these instructions are permitted to connect to this system while in proximity to a fall hazard. Users must be provided detailed information on the correct usage of the fall protection system and associated hazards. Training must impart the knowledge and skills necessary for safe use, including lecture, demonstration and hands-on practice with the complete fall protection system under controlled conditions as instructed by a qualified person or competent person acting under the direction of a qualified person.

Training should comply with the requirements of the fall protection equipment manufacturer, the employer's safety program and the regulatory rules in effect at the location where the fall protection system is being used. Refer to ANSI Z359.2-2007. Training must also cover procedures for rescue or evacuation after an accidental fall. Users must be trained and supervised so that they connect to the horizontal lifeline system with the correct personal protective equipment, as described in section 2.4. Users must be trained initially before use and re-trained as needed whenever changes take place in workplace conditions, locations or other factors affecting worker safety are affected. Records of training and retraining must be maintained for review by authorized third-parties.

6.0 USAGE

6.1 Before Installation

Before installing the MSA horizontal lifeline system with Free Standing Constant Force Post end-anchors, make sure you have read and understand all material contained in this manual and the instructions provided with each component used in conjunction with this system. Review the limitations described in section 3.2. Carefully inspect the system according to section 9 prior to installation. Secondary fall protection may be required to protect workers who are installing or removing the system.

6.2 Making Proper Connections

When using snaphooks or carabiners to couple components of the system together, be certain that accidental disengagement ("rollout") cannot occur. Rollout is possible when interference between a snaphook or carabiner and the mating connector causes the snaphook's or carabiner's gate to accidentally open and release. Rollout occurs when a snaphook or carabiner is connected to an undersize ring such as an eyebolt or other non-compatibly shaped connector. The mating elements in the MSA horizontal lifeline system and the mobile anchor device have been evaluated by the manufacturer to be compatible. Only self-closing, self-locking snaphooks or carabiners should be used in order 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 the lifeline. Snaphooks and carabiners must not be connected to each other. Do not attach two snaphooks or carabiners into one D-ring. Always follow the manufacturer's instructions supplied with each system component.

Authorized users of the system must be supervised to ensure that the user is equipped with the correct personal protective equipment, described in section 2.4. Supervision is necessary to ensure that only trained, authorized users who are fitted with a fast-acting fall limiter and a supplemental personal energy absorber are allowed to connect to the horizontal lifeline and anchor device system.

6.3 System Installation

Step 1:

Examine the anchor surface where the ManSafe Free Standing Constant Force Post anchors will be placed. The anchor surface must be flat and prepared as in the description in section 2.1. Verify that the end anchors are placed at least 10 ft (3 m) back from any exposed edge or unguarded opening. Confirm that adequate clearance is available in the path of a potential fall, referring to the clearance requirements in Table 2.

Step 2:

Assemble the ManSafe Free Standing Constant Force Post anchors according to the User Instructions provided with the product. Verify that each end-anchor assembly is assembled correctly with a total of 16 anchor plates to bring the total weight of each end-anchor to 880 lb (400 kg). The rubber coated segments must be in contact with the anchor surface. Each end-anchor assembly must be fitted with the D-ring connector. All bolts securing the D-ring, constant force post, cross-straps and segments must be tight.

Step 3:

Measure the distance exactly between the desired location of the end-anchors; measure from bearing point to bearing point between the two D-ring connectors. Now, assemble the MSA horizontal lifeline system according to the User Instructions provided with the system. The assembled horizontal lifeline should be adjusted to the length measured between the end-anchors, with the lifeline stretched taut.

Step 4:

Connect the MSA horizontal lifeline to the ManSafe Constant Force Post end-anchors using the connectors provided. Support the lifeline during installation to avoid dragging on the ground or putting kinks in the line. The lifeline connection to the second end-anchor should be made without exerting more force than necessary to reach the end-anchor connector by hand. Make fine adjustments to the length of the lifeline to stretch the lifeline enough so that the lifeline does not touch the walking surface. Use the adjustable turnbuckle in the case of the MSA Sure-Line Cable system. Use the tensioning device on the MSA Sure-Line and MSA Dyna-Line Synthetic systems.

CAUTION!

Do not over-tension the lifeline beyond 800 lbf (3 kN) as this may cause the Constant Force Post energy absorber to begin to deploy. Do not attempt to remove all sag from the lifeline. Stretch the lifeline only as tight as necessary to keep the lifeline from touching the walking surface.

Step 5:

Check the installed system to make certain that connecting snaphooks or carabiners are properly closed and locked and oriented along the intended axis of loading. Make sure that cross-gate loading is not present in any connecting snaphooks or carabiners. Check the lifeline load indicators and the Constant Force Post to be sure that they are not partially deployed.

Step 6:

A competent or qualified person must inspect the installation before first use. The user must inspect the system before each use thereafter according to section 8. Occasional re-tensioning of the lifeline may be required if loosening of the lifeline occurs while in service. Verify that there is no damage to the anchor surface immediately around the end-anchors and the anchor surface is free of contaminants, loose gravel, grit, or other debris.

6.4 Removal

Release tension on the lifeline by following the procedures outlined in the User Instructions provided with the MSA horizontal lifeline system. The Sure-Line Cable system can be loosened by turning the integral turnbuckle. The Sure-Line and Dyna-line lifelines can be loosened using the unfastening lever on the tension device. Disconnect the connector snaphooks or carabiners from the Constant Force Post end-anchors taking care not to place load on the Posts which could cause the energy absorbers to deploy. Remove the weight segments from the Freestanding Constant Force Post assembly before attempting to move the anchor device. Workers removing the system may require connection to a secondary fall arrest system.

CAUTION!

Do not attempt to move the anchor device by connecting to the D-ring on the Constant Force Post or by lifting the assembly using the cross straps as this will damage the device and render the anchor unusable. Move the Freestanding Constant Force Post assembly only after disassembling the elements of the device and moving them independently of one another to avoid damage.

7.0 CARE, MAINTENANCE AND STORAGE

7.1 Cleaning Instructions

Follow the instructions for cleaning components of the horizontal lifeline and anchor device system according to the User Instructions provided with each component. Excessive accumulation of dirt, paint or other foreign matter may prevent proper function of the horizontal lifeline and, in severe cases, weaken the lifeline. Periodic cleaning of the ManSafe Constant Force Post base segments may be required in order to keep the bottom surfaces in contact with the anchor structure free from algae or other contaminants which could reduce frictional resistance. Questions concerning cleaning components of the system should be directed to MSA.

7.2 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 MSA. Do not attempt field repairs.

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

No part of the ManSafe Constant Force Post anchor device is user maintainable. Refer to the User Instructions provided with each component of the system for additional advice on manufacturer's recommended maintenance and repair.

7.3 Storage

Follow the User Instructions provided with each component of the system for storage recommendations. Store components in a cool, dry and clean place out of exposure to direct sunlight. Avoid areas where heat, moisture, light, oil, chemicals (or their vapors), acids, alkalis or other corrosive conditions 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.

The Freestanding Constant Force Post should not be subjected to unnecessary stress, pressure or rough handling in storage. Prior to using equipment which has been stored for prolonged periods of time, a Formal Inspection should be performed by a competent or qualified person. See section 9.

8.0 MARKINGS AND LABELS

Labels on each component of the system must be present, legible and securely attached. Refer to the User Instructions provided with each component in the system for further detail, including number, location and contents of product labels. Where available, the Formal Inspection Grid must be punched with a date (month/year) indicating inspection within the last six months. If labels are missing or illegible, remove the component from service and mark it as "UNUSABLE" until a Formal Inspection has been performed according to the manufacturer's instructions.

9.0 INSPECTION

9.1 Inspection Frequency

The complete horizontal lifeline and anchor device system must be inspected by the user before each use. Additionally, it must be inspected by a competent person other than the user (a) at intervals of no more than six months, and (b) before the first use after changing the configuration or location of the system. The competent person inspection is referred to as Formal Inspection. See section 9.4 for Formal Inspection procedures.

CAUTION!

If the horizontal lifeline and anchor device system has been subjected to fall arrest forces or equivalent impact forces, it must be immediately removed from service and marked as "UNUSABLE" until destroyed or until recertification by factory-authorized service has been completed.

9.2 Procedure for Inspection Before Each Use

Perform the following steps in sequence. If in doubt about any inspection point, consult MSA or a competent person who is qualified to perform Formal Inspection as set forth in section 9.4.

Step 1: Inspect the Freestanding Constant Force Post end-anchors. Refer to the ManSafe User Instructions section titled "Inspection Before Use," provided with the anchor devices.

Step 2: Inspect the horizontal lifeline system. Refer to the MSA User Instructions section titled, "Inspection Before Each Use," provided with the horizontal lifeline kit.

Step 3: Inspect the components of the personal fall arrest system. Refer to the User Instructions provided with each component.

Step 4: Inspect the complete horizontal lifeline and anchor device system:

- The end-anchors must be in the correct position as originally configured in span length and at least 10 ft (3 m) from any exposed edge or unguarded opening. The area beneath each end-anchor must be free from standing water, grease, oil or other contaminants and free of loose gravel, grit or debris.

- Verify the connections between the horizontal lifeline and the end-anchor D-rings are closed and locked.
- The horizontal lifeline should be stretched taut between the end-anchors and suspended above the working surface.
- Check to verify that the horizontal lifeline energy absorber, if present, and the energy absorber of the Freestanding Constant Force Post have not been deployed.

Step 5: Verify that the personal fall arrest system has been rigged according to the requirements of these instructions, including full body harness, fast-acting fall limiter and personal energy absorber. Refer to section 2.4. Verify that the connection between the personal fall arrest lanyard and the horizontal lifeline is secure, closed and locked.

Step 6: Inspect the workplace for hazards in the path of intended movement, including trip-hazards, obstacles overhead, proximity to energized electrical sources, moving machinery, or other hazards to safe movement. Verify that adequate clearance is available to the top of the nearest object in the path of a potential fall directly below the fall path and on either side in the event of a swinging fall.

9.3 Corrective action

When inspection in accordance with section 9.2 reveals an unsafe condition, the component(s) must be immediately removed from service and marked as "UNUSABLE" until destroyed or subjected to corrective maintenance/repair as described in section 7.2. Damage, excessive wear, malfunction and aging are generally not repairable. If detected, immediately remove the component(s) from service and mark as "UNUSABLE" until destroyed. For final disposition, submit the component(s) to a competent person who is authorized to perform Formal Inspection. MSA advises that competent persons involved in inspection of horizontal lifeline systems be trained and certified by MSA.

CAUTION!

Only MSA or parties with written authorization from MSA may make repairs to the components of the horizontal lifeline and anchor device system.

9.4 Formal Inspection

9.4.1 Formal Inspection Frequency

The horizontal lifeline and anchor device system must be formally inspected by a competent person other than the user (a) at intervals of no more than six months, and (b) before the first use after changing the configuration or location of the system. Since the Free Standing Constant Force Post end-anchors and attached horizontal lifeline are designed for temporary use, it is more likely that Formal Inspection will take place each time the system is deployed in a new configuration or at a new location. If the products are 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 9.4.3. Due to the complexity of the system, MSA advises employers that Formal Inspection be performed by a competent person who has received factory-authorized training from MSA in this function. The inspection results should be recorded in the Formal Inspection Log and retained for reference. If the component passes inspection, and where an inspection grid is provided on the component, the inspector should punch the date (month/year) of Formal Inspection on the grid supplied with the labels on certain products. The user should never punch this grid; however, the user should check it before each to be sure a Formal Inspection has been performed within the last six months.

9.4.2 Control of Equipment

The user's organization should establish and enforce a policy and procedure whereby any component of the horizontal lifeline and anchor device system that is found to be defective, damaged or in need of maintenance be immediately removed from use and the complete system is removed from service as well, marked "UNUSABLE" and immediately thereafter submitted to custody of the competent or qualified person responsible for Formal Inspection. This has benefits that: (1) damaged 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; (4) there is a central point for evaluation of conditions that may be recurring and require preventive measure such as coordination with the equipment manufacturer, selection of alternate equipment, additional training of equipment users, or changes in workplace conditions.

9.4.3 Formal Inspection Procedure

Formal Inspection procedures for each of the components of the horizontal lifeline and anchor device system are included with the User Instructions provided with the components. Copies of the Formal Inspection Log forms for the MSA horizontal lifeline product and the ManSafe Free Standing Constant Force Post should be kept together with the Formal Inspection Log form documenting the complete system, as provided in Annex A of this User Instruction. Taken together, these procedures and forms describe and provide records for Formal Inspection of the primary elements of the fall protection system. Formal Inspection of the personal protective equipment used with the horizontal lifeline and anchor devices is treated separately, as these components are carried by the authorized users of the system and may involve several equipment owners.

The Formal Inspection Procedure is similar to the user's inspection before each use described in section 9.2. However, it differs in three important respects, namely: (1) it is performed by a competent or qualified 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 fall protection system as either "acceptable" or "not acceptable" for use.

- Step 1: Record on the Formal Inspection Log form the model number, serial number and date of manufacture of the MSA horizontal lifeline system (Sure-Line Cable, Sure-Line Synthetic or Dyna-Line product)
- Step 2: Record on the Formal Inspection Log form the model numbers, serial numbers and dates of manufacture of the two ManSafe Free Standing Constant Force Post end-anchors
- Step 3: Perform the steps for Formal Inspection of the MSA horizontal lifeline as described in the User Instructions for that product. Record results on the Formal Inspection Log form, provided. Notate the completion of this step on the Formal Inspection Log Form, Annex A.
- Step 4: Perform the steps for Formal Inspection of the ManSafe Free Standing Constant Force Posts as described in the User Instructions for that product. Record results on the Formal Inspection on the Record Card, provided. Notate the completion of this step on the Formal Inspection Log Form, Annex A.
- Step 5: Inspect the complete horizontal lifeline and anchor device system:
- The end-anchors must be in the correct position as originally configured in span length and at least 10 ft (3 m) from any exposed edge or unguarded opening. The area beneath each end-anchor must be free from standing water, grease, oil or other contaminants and free of loose gravel, grit or debris.
 - Verify the connections between the horizontal lifeline and the end-anchor D-rings are closed and locked.

- The horizontal lifeline should be stretched taut between the end-anchors and suspended above the working surface.
- Check to verify that the horizontal lifeline energy absorber and the energy absorber of the Freestanding Constant Force Post have not been deployed.

Notate the completion of these tasks on the Formal Inspection Log Form, Annex A.

Step 6: Identify the names of authorized users of the horizontal lifeline and anchor device system on the Formal Inspection Log Form, Annex A.

Step 7: File the Formal Inspection Log Forms for future reference.

ANNEX A

FORMAL INSPECTION LOG FORM
MSA HORIZONTAL LIFELINE AND ManSafe FREESTANDING CONSTANT FORCE POST (FSCFP)
SYSTEM

Inspection Date: _____ Location: _____

Inspector: _____ Date Installed: _____

MSA Horizontal Lifeline Model Number: _____

MSA Horizontal Lifeline Serial Number: _____

ManSafe Free Standing Constant Force Post 1, Serial Number: _____

ManSafe Free Standing Constant Force Post 2, Serial Number: _____

Results of Inspection, MSA Horizontal Lifeline: ___ Pass ___ Fail

Results of Inspection, ManSafe FSCFP 1: ___ Pass ___ Fail

Results of Inspection, ManSafe FSCFP 2: ___ Pass ___ Fail

Comments: _____

Position of system is at least 10 ft (3 m) from nearest edge: ___Pass ___Fail

Area beneath and adjacent to anchors is clean and free
of water, ice, grease, oil and debris: ___Pass ___Fail

Connections between horizontal lifeline and anchor
device D-rings is secure: ___Pass ___Fail

Horizontal lifeline is taut and not in contact with the
anchor surface: ___Pass ___Fail

Horizontal lifeline energy absorber and FSCFP energy
absorber are not deployed: ___Pass ___Fail

Comments: _____

Authorized Users:

User 1: _____

User 2: _____

(for additional users, add names on a supplementary sheet)

Additional Comments: _____

WARRANTY

Warranty – 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 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. 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 MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. MSA makes no warranty concerning components or accessories not manufactured by 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. MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedy - It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof, that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the Purchaser, F.O.B. Purchaser's named place of destination. Failure of MSA to successfully repair any nonconforming product shall not cause the remedy established hereby to fail of its essential purpose.

Exclusion of Consequential Damages - Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.

For additional information please contact the Customer Service Department at 1-800-MSA-2222 (1-800-672-2222).

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