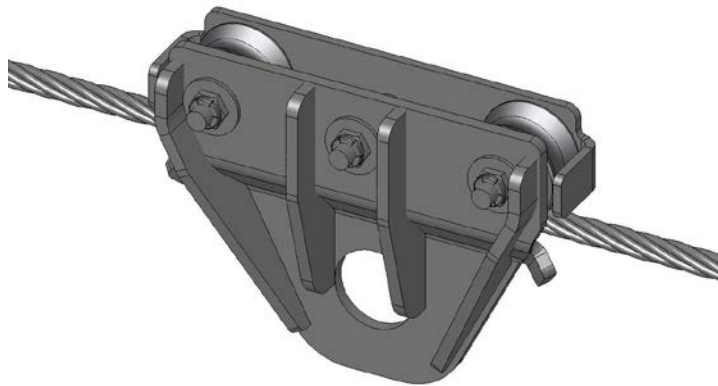




Reliance Industries, LLC

**Installation, Operation, Inspection and Maintenance
Instructions for the Hands-Free Traveler for Skyline™
Horizontal Lifelines**

6461-1



Reliance Industries, LLC

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Important Instructions!

These instructions must be kept on file and available for the users reference at **all** times. The users must read and full understand these instructions or have the instructions explained in detail before using this equipment. **Failure to observe these instructions could result in serious injury or death.**

Prior to use, all workers must be trained in the proper use of all systems and equipment.

A Training and Instruction review should be repeated at regular intervals.

A rescue plan must be prepared; the workers must be trained in its use, and rescue equipment must be on hand prior to any use of this horizontal lifeline system.

Any questions regarding these instructions should be directed to:

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Important OSHA Regulations Covering the Use of Horizontal Lifeline Systems

OSHA 1910.66 Subpart M – 1926.502 (d)(8):

Horizontal Lifelines shall be designed, installed, and used under the supervision of a qualified person as part of a complete fall arrest system, which maintains a safety factor of at least two.

OSHA 1910.66 (b):

“Qualified Person” means one with a recognized degree or professional certificate and extensive knowledge and experience in the subject field who is capable of design, analysis, evaluation, and specifications in the subject work, project, or product.

OSHA 1910.66 (b):

“Competent Person” means a person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use with related equipment

OSHA 1910.66:

Personal fall arrest systems shall be rigged such that an employee can neither free-fall more than 6-ft. nor contact any lower surface.

OSHA 1910.66 (n):

The sag in the lifeline should be minimized to prevent the connecting piece of equipment (self-retracting lanyard or other appropriate personal fall arrest device) from sliding down the lifeline to a position which creates a swing hazard during a fall arrest.

OSHA Standards, Interpretations and Compliance Letters, 02/09/1995-Criteria for personal fall arrest systems:

The free-fall distance is limited to 6 feet. The deceleration distance must not exceed 42 inches; lifeline elongation is not included in deceleration distance; and the total fall distance is unregulated except that the employee cannot make contact with a lower level...The safety factor of two should be applied based on the anticipated maximum arrest force, not the fall energy.



System Description

The Reliance Industries Hands-Free Traveler is a connecting attachment point for use with Skyline™ Horizontal Lifelines. It allows a worker to connect a shock-absorbing lanyard (SAL) or self-retracting lifeline (SRL) to a Hands-Free Traveler which then slides along an approved and properly tension Skyline Horizontal Lifeline. The Hands-Free Traveler also permits the user to slide the device along the wire rope and across mid-span supports that may be present on the horizontal lifeline without the user having to manipulate the Traveler directly. This allows for the use of mid-spans supports on horizontal lifelines that are installed far overhead out of the reach of the worker.

Personal Fall Arrest Equipment Used with the Lifelines

Care should be used in selecting harnesses for use with this engineered fall protection system. Harnesses with sewn down back pads can limit as much as 1 ft. of back pad slippage during fall arrest, giving additional clearance for safety. If the system will be used where a worker could encounter a head first free-fall, a non-secured back pad can slide down the webbing to the small of the back, allowing the worker to fall out of the harness through the top by allowing the harness straps to slip over the shoulders. For this reason, we recommend the use of harnesses with Reliance Industries style high friction back pads.

Parts of the Hands-Free Traveler

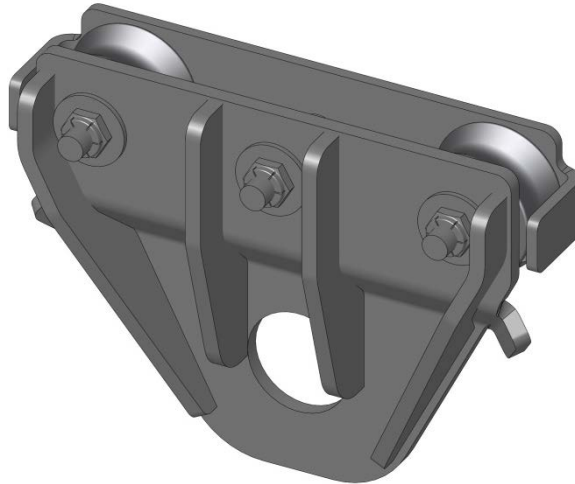


Fig. 1 Hands-Free Traveler

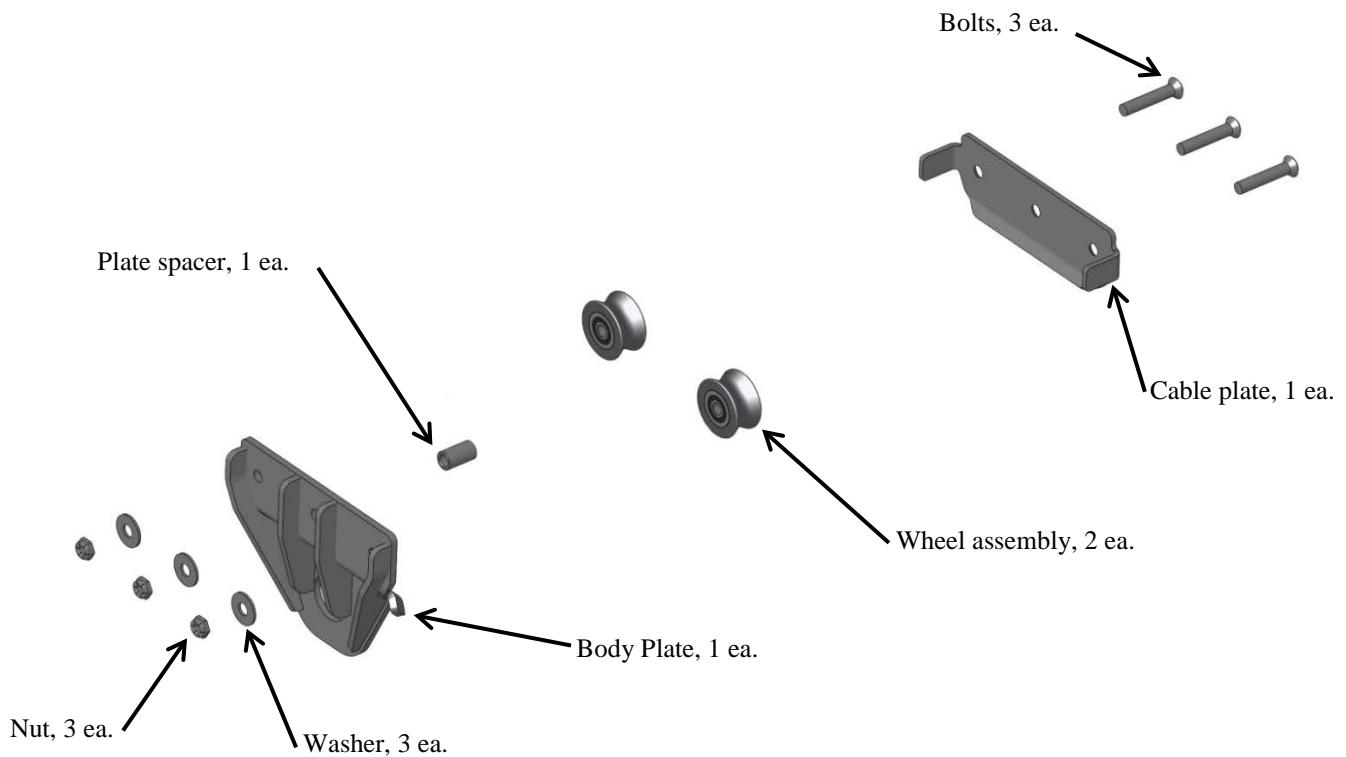


Fig. 2 Hands-Free Traveler, exploded view

Installation

Installation of horizontal lifeline systems should be done under the supervision of a Qualified Person trained in their function and use. Use only parts that have been qualified as compatible components by Reliance Industries. Always install this system where the end anchorages are at the same elevation. Any changes or deviations to the design require approval by Reliance Engineering before being implemented.

NOTE: Fall protection equipment **MUST** be worn during installation or removal of the Hands Free Traveler. The Traveler may not be used as an approved fall protection method until it has been fully re-secured to the horizontal lifeline. It is **NOT** necessary to remove a horizontal lifeline to complete the installation procedure, however, care must be taken to not excessively load or pull on the horizontal lifeline wire rope or the HLL shock absorber **MAY** be deployed in which case it would need to be replaced before the HLL could be returned to service. It is permissible to use the horizontal lifeline as a method of fall protection during the installation (or removal) of the Hands-Free Traveler (if the horizontal lifeline has been inspected and certified for use prior to connection), however, the Hands-Free Traveler may not be used until it has been fully installed, inspected, and certified for use.

Option 1, Installed HLL System:

1. Using a 3/16-in. allen wrench and a 1/2-in. box end wrench, loosen the 3 nuts holding the traveler together. The nuts do not need to be fully removed, but loosened fully to allow the Cable Plate to slide away from the Body Plate (see Figure 2 for parts identification).
2. While holding the plates apart, slide the Traveler onto the horizontal lifeline wire rope.
3. Press the Traveler plates together. Using the allen wrench and a box end wrench tighten the nuts of the traveler together. Torque the nuts to approximately 13- to 20-ft/lbs.
4. Slide Traveler back and forth over wire rope while examining wheels for motion. Wheels should turn and rotate freely as Traveler moves. For any wheel that does not spin freely, the Traveler may need to be dis-assembled and the wheels and bolts examined to verify there is no debris present that would keep wheel from spinning freely. Re-assemble Traveler per above steps and re-examine for smooth rolling motion and confirm that the wheels are turning smoothly. Any Traveler still failing to roll smoothly should be returned to Reliance for further examination. See Figures 3 and 4 for illustrations of a properly installed Traveler.
5. Attach any personal fall arrest equipment which will be used with the Traveler once fully inspected.
6. Examine the Traveler rolling on the horizontal lifeline cable and confirm that the wheels are turning smoothly with the weight of the personal fall arrest equipment attached to the Traveler. If the wheels are not turning, loosen nuts and repeat steps 1 through 3 after examining all parts for debris or other contaminants that would prevent wheels from spinning.

User Instructions

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Option 2, During HLL System Installation:

1. Prior to installing the HLL System cable, insert the free end of the HLL cable under the wheels of the Traveler.
2. Install the HLL System according to its supplied Installation Instructions.

Examine Traveler to confirm it cannot detach from the cable due to excessive slot clearance. Attempt to pull the cable through the gap between the cable plate and body plate. If cable can be pulled through the slot, the Traveler **MUST** be returned to Reliance Industries for further examination.

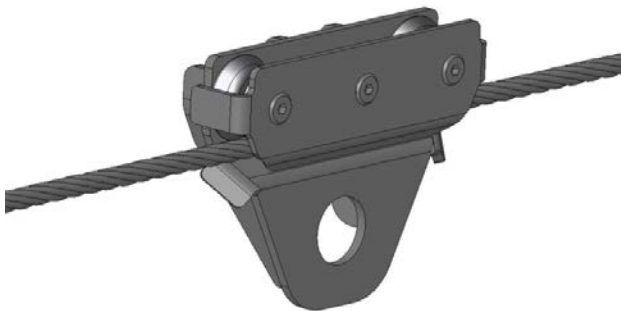


Fig. 3 Hands-Free Traveler installed

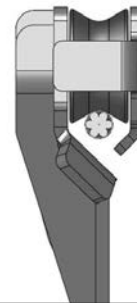


Fig. 4 Hands-Free Traveler installed, end view

Examine the horizontal lifeline shock absorber to verify that it is intact (no slide bearing exposed) and that no Traveler installation activity has caused the HLL to be loaded. For any HLL where the shock absorber is showing signs of being deployed (exposed slide bearing), then the entire HLL must be examined by an approved qualified person, the HLL shock absorber replaced, and the entire system re-certified before it is returned to service.

Removal of the Hands-Free Traveler

Removal of the Hands-Free Traveler may only be performed once all personal fall arrest equipment has been removed from the Traveler. Fall protection equipment must be worn during the removal of the Traveler.

1. Using a 1/2-in. wrench and a 3/16-in. allen wrench loosen the 3 nuts and bolts of the Traveler. The nuts and bolts do not need to be fully removed, just loosened enough to allow the two side plates of the Traveler to separate. **CAUTION:** Once the bolts have been loosened, it is possible for the side plates to slide apart unexpectedly and the Traveler to fall free of the horizontal lifeline cable. Care must be taken to retain a firm grasp on the Traveler to ensure it does not fall uncontrollably to the ground injuring personnel below.
2. Spread the side plates of the Traveler apart and slide the Traveler free of the horizontal lifeline cable.

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3. Re-tighten the nuts and bolts of the Traveler to ensure they do not accidentally come loose and separate.
4. Examine the horizontal lifeline shock absorber to verify that it is intact (no slide bearing exposed) and that no Traveler removal activity has caused the HLL to be loaded. For any HLL where the shock absorber is showing signs of being deployed (exposed slide bearing), then the entire HLL must be examined by an approved qualified person, the HLL shock absorber replaced, and the entire system re-certified before it is returned to service.

Use of the Hands-Free Traveler

Once the Hands-Free Traveler has been installed and certified for use, a single worker may connect to it using either an approved self-retracting lifeline (SRL), or a shock-absorbing lanyard. Connection is made to the hole in the side plate of the Traveler. Once connected, the Traveler will slide along the wire rope of the horizontal lifeline as the worker walks down its' length. If the SRL connected to the Traveler is a heavy unit with a large line capacity, the weight may cause the Traveler to "lag" behind the worker. In some cases, this may result in a swing fall should a fall occur. A good practice in all cases is for the worker to slide the Traveler along the HLL cable until it is positioned overhead at the work area; this will reduce the possibility of a swing fall should an accident occur.

For horizontal lifelines that are multi-span and have been installed with Hands-Free Bypass devices along their length, in some cases the Traveler may have some resistance in sliding across the bypass, especially on long lifelines or if the SRL is a heavy, large length unit. By grasping the wire rope of the SRL, giving it a sharp tug to "lock" the SRL and then walking under the bypass, the Traveler will be able to pass over the bypass much easier. Once past the bypass the cable may be released so that it can be retracted back into the SRL and the worker may proceed down the length of the HLL.

Training

It is the responsibility of the employer to train all workers prior to using this system (per OSHA 1926.503 (a)(1)). The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.

The employer shall assure that, as necessary, each employee has been trained by a competent person qualified in the following areas:

- a. OSHA regulations governing the use of horizontal lifelines.
- b. Ability to recognize potential fall and workplace hazards.
- c. Method of inspection of safety equipment.
- d. Rescue procedures.
- e. Installation and removal techniques.



Planning for Rescue

Prior to system use, a rescue plan must be prepared, the workers must be trained in its use, and the rescue equipment must be on hand to implement it in case of a fall.

Typical rescue plans include (but are not limited to) the following items:

1. List of equipment that must be readily accessible in the event of an emergency and the names of those workers certified to use or operate that equipment.
2. Emergency contact phone numbers (ambulance, hospital, fire department...) and a means to contact them (cell phone, emergency radio).
3. List of employees on the site, and the specific tasks they will perform to effect the rescue.

The equipment that will be used to aid in the rescue of any worker must be attached to structural anchorages independent of those used for the travel restriction lifeline system. During installation of travel restriction lifeline anchorages, tie-off and equipment attachment hard points should be attached, and also clearly marked in such a manner as to provide a means to rescue a worker in any position along the lifeline system.

Inspection

The Hands-Free Traveler must be inspected by a Qualified Person on at least an annual basis to ensure its proper functioning. All fasteners should be examined to verify that they are tight and that the side plates have not deformed or loosened where the Traveler could slide free of the horizontal lifeline cable. Any Traveler that shows signs of damage, corrosion, that could slide free of the cable, or has been involved in a fall arrest **MUST** be removed from use immediately and returned to Reliance Industries for servicing.

Prior to each use, the worker must inspect the system for any physical damage, wear, corrosion, or malfunctioning parts. Check the shock absorber of the horizontal lifeline for deployment by looking to see if the black slide bearing under the shock absorber eye is exposed. The Traveler should be examined to ensure that it is capable of sliding freely along the horizontal lifeline cable when pulled on. Any Traveler that fails to move freely must be examined by a Qualified Person to determine if it is safe to use. Travelers that do not pass this inspection must be returned to Reliance Industries for servicing.

Servicing

A qualified person trained in the inspection and servicing of system components must carry out servicing of this system. The company's safety officer should maintain a record log of all servicing and inspection dates. The system and all components must be withdrawn from service if subjected to fall arrest forces. Those components may be returned to service only after being certified by a qualified person. Only original Reliance Industries equipment and replacement parts are approved for use in this system. Contact Reliance Engineering with questions and when in need of assistance.

Warnings and Limitations

Proper care should always be taken to visually scan the work area prior to use. Remove any obstruction, debris, and other materials from, and beneath the work area that could cause injuries or interfere with the operation of this system. Be cautious of swing fall hazards if working horizontally to the side of the lifeline. Always use the shortest lanyard length possible to connect to the lifeline. Be aware of the movements of others on the lifeline at the same time, knowing that if they fall, the sudden motion in the lifeline could pull others off balance. When working at a fixed area, tie off to other suitable overhead anchorages if they exist, allowing the lifeline to be occupied by fewer people.

Users should be familiar with pertinent regulations governing the use of this system and its components. Only trained and competent personnel should install and supervise the use of this system.

Do not exceed manufacturers' recommended span length or maximum number of people on the same lifeline as listed on either the tag attached to the specific horizontal lifeline system, or in the lifeline parameter data sheets.

Do not use these components with any other horizontal lifeline material. Only 3/8 – 7x19 IPS or stainless steel wire rope is allowed, due to its high-energy capacity.

Use only Reliance supplied or qualified compatible components.

If you have any questions regarding the correct installation or use of this product DO NOT USE. Call Reliance Engineering at Ph. (303) 424-8650 or Fax (303) 424-8670.

User Instructions
6461-1 Hands-Free Traveler



Reliance Industries, LLC

Inspection Log for Hands-Free Traveler

Company: _____ Location: _____ Date: _____
 Job Site: _____ HLL Log No.: _____ System No.: _____

Is this system used as described in the HLL Log No. _____ to conform to design document criteria? _____

Describe non-conforming conditions in the boxes below:

Inspection Criteria	Missing Parts	Corrosion	Deformed Parts	Excessive Loading
Nuts/bolts present? (3 ea.)				
All nuts tight?				
Traveler cannot pull free from HLL?				
Side plate welds intact?				
Wheels turn freely?				
Traveler moves freely?				

Has a Rescue Plan been prepared? _____

Is Rescue Equipment on hand? _____

Have workers been trained in the Rescue Procedures and been given a copy of the Rescue Plan? _____