ENERGY ABSORBER ASSEMBLY AND COMPONENTS THEREOF

BACKGROUND OF THE INVENTION

[0001] To protect workers who work at heights or are at risk of falling distances, lifelines interconnecting support structures and safety harnesses donned by workers are commonly used. Examples of lifelines include but are not limited to self-retracting lifelines, lanyards, and other suitable lifelines. If a fall event occurs, the lifeline limits the distance the worker could fall, however, injury to the worker could still occur if, for example, the fall distance before the lifeline becomes taut is significant. Energy absorbers are typically used in conjunction with such fall arrest equipment to provide a more gradual, less abrupt stop, which assists in preventing or reducing injuries because energy absorbers absorb some of the kinetic energy of the falling body.

[0002] Energy absorbers could interfere with the operation of such fall arrest equipment, especially if they are relatively large and / or are in positions where they could easily become tangled with the lifelines, safety harnesses, etc. Therefore, the present invention addresses such problems because it is relatively compact and connects securely to the safety harness to reduce the risk of it interfering with other components of the fall arrest equipment.

[0003] For the reasons stated above and for other reasons stated below, which will become apparent to those skilled in the art upon reading and understanding the present specification, there is a need in the art for an energy absorber assembly and components thereof.

BRIEF SUMMARY OF THE INVENTION

[0004] The above-mentioned problems associated with prior devices are addressed by embodiments of the present invention and will be understood by reading and understanding the present specification. The following summary is made by way of example and not by way of limitation. It is merely provided to aid the reader in understanding some of the aspects of the invention.

[0005] In one embodiment, an energy absorber assembly for use with a safety harness having a dorsal D-ring comprises a connector, a bracket assembly, a fastener, and an energy absorber. The connector

is configured and arranged to operatively connect to the safety harness proximate the dorsal D-ring. The fastener operatively connects the bracket assembly and the connector, and the fastener releases the bracket assembly from the connector when subjected to a predetermined load. The energy absorber operatively connects the bracket assembly and the connector, and the energy absorber includes a first portion and a second portion that separate to absorb shock after the bracket assembly is released from the connector.

[0006] In one embodiment, an energy absorber assembly for use with a safety harness having a dorsal D-ring comprises a fastener, a connector, a bracket assembly, and an energy absorber. The connector is configured and arranged to operatively connect to the safety harness proximate the dorsal D-ring. The bracket assembly includes a base and a lifeline connector. The base has a slot forming a tab portion with an aperture and a bar portion. The aperture is configured and arranged to receive the fastener. The bar portion is configured and arranged to be engaged by the energy absorber. The lifeline connector is configured and arranged to engage a lifeline. The fastener operatively connects the bracket assembly and the connector. The fastener releases the bracket assembly from the connector when subjected to a predetermined load. The energy absorber operatively connects the bracket assembly and the connector and includes a first portion and a second portion that separate to absorb shock after the bracket assembly is released from the connector.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The present invention can be more easily understood, and further advantages and uses thereof can be more readily apparent, when considered in view of the detailed description and the following Figures in which:

[0008] Figure 1 is a front perspective view of a connector in an open position, the connector being a component of an energy absorber assembly constructed in accordance with the present invention;

[0009] Figure 2 is an exploded front perspective view of the connector shown in Figure 1;

[0010] Figure 3 is a rear view of the connector shown in Figure 1 in a closed position;

[0011] Figure 4 is a front view of the connector shown in Figure 1 in a closed position;

[0012] Figure 5 is a front perspective view of an energy absorber assembly constructed in accordance with the present invention;