

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

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*Juliann Sum, Acting Chief*

October 14, 2014

Jeff Webb
Safety Sales Manager
Pacific Safety Equipment
750 Monterey Pass Road
Monterey Park, CA 91754

Dear Mr. Webb:

Thank you for your email of October 10, 2014, to Acting Chief Juliann Sum concerning alternate methods of fall protection on roofs. Ms. Sum has asked me to reply on behalf of the Division.

I have evaluated the Garlock Safety Cobra Multi-Man LifeLink and Garlock Safety Cobra Twin-Man LifeLink (fall protection carts) which are advertised on the website (www.pacificsafetysafequip.com) provided in your email.

The fall protection carts do not meet the minimum requirements of the California Code of Regulations Title 8 for use on roofs. I cannot comment on the use of fall protection carts in other states.

Title 8 section 3212 requires guardrails at the edge of roofs. Fall protection in lieu of guardrails is allowed when less than 4 individual approaches a year are made within 6 feet of a roof edge.

3212 (d)(1) Guardrails as specified in section 3209 shall be required at locations where there is a routine need for any employee to approach within 6 feet of the edge of the roof. When intermittent work is being done safety belts and lanyards, or an approved fall protection system may be provided in lieu of guardrails.

For the purpose of this requirement, routine means more than four times a year and intermittent work means work not exceeding four times a year.

[Four times has been deemed to mean a total of four individual approaches to the roof edge and not multiple approaches on four different occasions]

Where fall protection systems are allowed while working on roofs, the systems must meet the requirements of Title 8 Section 3291(f) (referenced by 3212(d)(3)) or equivalent anchorage. 3291(f)(2)(C) requires fall protection anchorages and assemblies to sustain a 5000 pound load applied in any direction without permanent deformation.

3212(d)(3) Where fall protection systems are used, safety lines and/or lanyards shall be attached to roof tie-backs meeting the requirements of section 3291(f) or equivalent anchorage. A safe and unobstructed access shall be provided to all roof tie-back locations.

3291(f) Roof Tie-Backs.

(2) Such devices should be spaced at approximately 12-foot intervals; however, the spacing shall depend primarily on the availability of roof structural framing members of sufficient strength to safely carry applied loads. Tie-backs may be installed in structural parapets that are of adequate strength to sustain applied loads, but placement shall be as close to the roof level as practicable. Design criteria for tie-backs shall be as follows:

(C) Assembly and anchorage provisions adequate to sustain a 5000 pound load applied in any direction without permanent deformation.

The fall protection carts do not meet the requirements of 3212(f) or provide equivalent protection for the following reasons:

1. 3291(f)(2)(C) requires the anchorage to be affixed to or integral with the structure, and requires that the anchor be capable of supporting the full design load (5000 pounds) in all directions. The fall protection carts are not capable of meeting this criterion. The Garlock Multi-Man Cobra Cart Training Manual available at www.pacificsafetyequip.com states the following:

STAY INSIDE THE SAFE ZONE

When working at the roof edge, locate the Cobra Cart so it is straight back from the area where you will be working. If you must move side to side along the roof edge for brief periods to perform your work, move slowly and do not go any farther than 45 degrees to the right or left. This is the SAFE ZONE. Leaving this zone will put you in DANGER and may cause serious injury or death to you should you fall over roof edge.

This requirement for employees to stay in a "safe zone" provides significantly less protection than an anchorage in compliance with 3291(f)(2)(C). A code compliant anchorage provides fall protection regardless of direction whereas the fall protection cart only provides protection within the narrow "safe zone."

2. According to the same training manual, the fall protection carts require that debris and loose coverings be removed from the area where the cart will be used. The manual also states that the cart may slide if the area is not free of ice, snow, water, oil, dirt, or dust. It is not reasonable to expect a roof to be free of dirt or dust. The proper functioning of the fall protection carts is dependent on the condition of the roof. A code compliant anchor will support 5000 pounds regardless if there is dirt, dust, oil, snow, oil or water on the roof.
3. The fall protection carts are intended to be shuttled about the roof to locations where they are needed. There are likely to be many roofs that will not sustain the concentrated

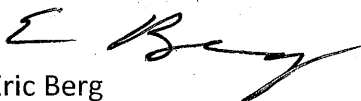
load of the cart (up to 1000 pounds). A code compliant anchor does not present the danger of structurally damaging the roof due to its own weight.

4. The fall protection carts are advertised as only suitable for certain substrates where as a code complaint anchor functions independently of the roof substrate. The Division does not expect that every possible user will be sufficiently knowledgeable to be able to discern when and where the cart may be or may not be suitable for use.
5. The user of the fall protection carts must to be cognizant of even more issues than are already required for use of a roof tieback anchor. Use of the fall protection cart requires that the user:
 - a. Be continuously aware of his or her orientation relative to the cart,
 - b. Set brakes to prevent the cart from moving under load,
 - c. To relocate the cart as work progresses,
 - d. To make decisions about whether the cart is suitable for use on any given roof.

In summary, the fall protection carts provide a variable load sustaining capability based on the type of roof on which they are used, the condition of the roof, and the position of workers relative to the cart. The condition of the roof and the position of the workers relative to the cart may be continually changing variables. The factor of safety, if any, is equally variable, and it is unreasonable to expect the user to have each application evaluated by a professional engineer for each use, between and within jobs.

The fall protection carts are not allowed to be used as fall protection in California since they do not provide equivalent protection to a code compliant anchor as required by section 3212(d)(3). If you wish to pursue this matter further, you should contact the Occupational Safety and Health Standards Board and petition for a change to the California Code of Regulations Title 8.

Sincerely,



Eric Berg
Acting Principal Safety Engineer