

State of California
Department of Industrial Relations
Occupational Safety and Health Standards Board

Petition File No. 595

Board Staff Evaluation
Submitted by Michael Nelmda, Sr. SE

May 12, 2022



State of California

Gavin Newsom, Governor

INTRODUCTION

Petition 595 (Petition) was submitted by Matthew Cross (Petitioner) on December 2, 2021. The Petition seeks to add a new standard to General Industry Safety Orders related to manual material handling (MMH) carts.

REQUESTED ACTION

The Petitioner requests the Board consider rulemaking related to the following:

- To add a new standard to General Industry Safety Orders to require all new manufacturing of MMH carts with loose or removable handles to include a built-in or self-contained means of securing the handholds.
 - The proposal would require that handholds must be secured prior to transporting the load and capable of withstanding the expected forces based on the cart capacity and ground conditions.
 - The proposal would also require MMH cart manufacturers to notify employers who have purchased non-conforming MMH carts to replace or phase-out their non-conforming carts.

BACKGROUND/HISTORY

As stated by the Petitioner, “This Petition specifically addresses the design, manufacturing, and use of the handles/handholds on all flatbed carts, panel carts, manual material handling carts, and manually operated platform trucks.” See Figure 1. MMH carts feature a flat platform resting on casters with a U-shape handle projecting upward from the platform. The platform carts depicted in Figure 1 are indicative of commonly used MMH carts.



Figure 1 Photo of W.T. Hight MMH Carts submitted by the Petitioner

“Dollies, handtrucks or luggage carriers¹” are grouped together within the United States Consumer Product Safety Commission’s (CPSC) National Electronic Injury Surveillance System (NEISS). The CPSC uses NEISS data to produce nationwide estimates of product-related injuries. To clarify, what the Petitioner terms as “MMH carts” are not “hand trucks” (commonly known as dollies) regulated under title 8, section 3315 (section 3256, prior to 1955). Convertible versions of hand trucks exist and in some instances share

¹ [NEISS \(cpsc.gov\)](https://www.cpsc.gov/NEISS) NEISS Coding Manual Accessed March 28, 2022

the same handle detachment concerns raised by the Petitioner.

PETITIONER'S ASSERTIONS

The Petitioner's proposed standard would require:

1. "[T]hat all new manufacturing of MMH Carts with loose or removable handles would include a built-in, or self-contained means of mechanically attaching or securing the handhold in order to withstand the expected forces considering the MMH Cart weight capacity, and the foreseeable ground conditions." (Petition, p. 1.)

a. "MMH Cart Manufacturers that have supplied, and continue to supply MMH Carts with loose or removable handles to be used in commercial applications as a primary source of MMH be required to contact companies they've supplied and work with them to either replace or phase-out said MMH Carts with loose or removable handles, or supply a retro-fit means of mechanically securing the handles to withstand the expected forces and conditions. [...]Retrofit attachments could be as simple as a pin, bolt, or latch[.]" (Petition, p. 1.)

2. "[T]hat the handles/handholds would be securely and mechanically attached to the MMH Cart before the MMH Cart is loaded with enough material or weight to require manual force strong enough to cause a fall, since the initial forces required to start or begin movement of an MMH Cart are usually the highest forces applied." (Petition, p. 1.)

The Petitioner asserts:

"There are many regulations, articles, limits, and instructions on the ergonomics, the techniques, the caster types, the weights and force limits, and even the importance of the placement and dimensions of handles and handholds. [There are no] regulations, articles, limits, or instructions on the importance of the security or stability of the point of contact (handles/handholds) with the MMH Cart." (Petition, p. 2.)

Further, the Petitioner includes information collected by the Petitioner's union:

"As part of a Grievance process involving MMH Carts with unsecured handles, my Union, along with myself, conducted a survey of 66 Delivery Drivers (including myself), who use MMH Carts with loose or unsecured handles on a daily basis. In the results of the survey, it was revealed that 43 out of the 66 Drivers surveyed (including myself), had suffered falls due to loose or unsecured handles separating from MMH Carts while being used."

[...]

“Accidents involving falls due to loose handles on MMH Carts can easily be overlooked or disregarded on a basis of singular instances. It’s very possible that some falls of this type are simply listed as falls, and do not even address the fact that they involved a loose or unsecured handle on a MMH Cart. But if looked at more closely, the commonality and regularity of these incidents becomes undeniable. It is my sincere hope that the OSHSB, through awareness and regulation, can enact safe standards on MMH Cart handles within the MMH Industries, and that many accidents and injuries would be prevented.”
(Petition, p. 2.)

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (Cal/OSHA) EVALUATION

Cal/OSHA’s evaluation dated March 4, 2022 recommends the Petition be DENIED. In relevant part Cal/OSHA opined:

“[T]he petitioner’s proposal for new regulation requiring MMH carts to have non-removable handles is unnecessary. Existing title 8 regulations currently address the hazards of MMH carts used with removable handles. Additionally, non-removable handles or permanently fixed handle carts are commercially available for employers when needed to prevent accidents such as those described by the petitioner.” (Cal/OSHA evaluation p. 8)

STAFF EVALUATION

There are no regulations specifically related to the design of nor the proper use of MMH carts. Additionally, as described by the Petitioner, there are no consensus standards regarding the design of MMH carts. Title 8, section 3328, however, does apply to MMH carts as a general regulation outlining employers’ duty to minimize hazards for machinery and equipment.

Relevant Standards

Federal Standards

There are no relevant federal standard.

California Standards

There are no specific title 8 regulations regarding MMH carts.

There are, however, general regulations which address design and securing of machinery and equipment components (such as MMH carts):

§3328. Machinery and Equipment.

(e) Machinery and equipment components shall be designed and secured or covered (or both) to minimize hazards caused by breakage, release of mechanical energy (e.g., broken springs), or loosening and/or falling unless the employer can demonstrate that to do so would be inconsistent with the manufacturer's recommendations or would otherwise impair employee safety.

Consensus Standards

There are no relevant consensus standards.

Staff Analysis

The MMH cart handles described by the Petitioner as “removable” or “loose” are generally installed on to the platform of the MMH cart by nesting the ends of a “U” shaped handle to corresponding mating-cylinders/holes on the platform, mounted on either side of the platform or both to one side of the platform. The handle designs generally rely on torque applied to the handle and friction at the interface between the handle ends and the mating-cylinder/hole to prevent the handle from loosening from the platform when the cart is pushed or pulled. Other more complex designs allow for the handle to be repositioned at different angles to stow the handle or to allow for greater clearances from the material loaded on the platform. Generally, the handles are loosed from the platform when the handles are pulled upward/in line with the ends of the “U” handle. Often, manufacturers incorporate a pin, bolt or other similar item which is inserted through holes at the ends of the handle to prevent the handle from releasing from the platform.

The Petitioner request the Board adopt design criteria for MMH carts and specific work practice requirements for MMH cart handles. Specifically, the Petition asks the Board to adopt regulations which require a built-in, or self-contained means of mechanically attaching or securing the handhold in order to withstand the expected forces considering the MMH cart weight capacity, and the foreseeable ground conditions. Additionally, the Petitioner request that such devices be used prior to propelling the cart under load.

Title 8 regulations do address concerns raised by the Petitioner:

§3328. Machinery and Equipment.

(e) Machinery and equipment components shall be designed and secured or covered (or both) to minimize hazards caused by breakage, release of mechanical energy (e.g., broken springs), or loosening and/or falling unless the employer can demonstrate that to do so would be inconsistent with the

manufacturer's recommendations or would otherwise impair employee safety.
[Emphasis added]

Coverage under section 3328(e) is sufficient to protect employees. Employers are to ensure that machinery and equipment components such as handles on MMH carts are designed and secured to minimize hazards. In practice, few employers are involved in the design of the machinery and equipment used in their facility. It is incumbent for the employer to assess what hazards are posed when machinery or equipment are introduced into the workplace. (see section 3203(a)(4)(B))

Further, the Petitioner request the handles be secured prior to propelling the cart under load. "Securing" the handle prior to driving the load is also addressed under 3328(e).

Board staff reviewed Federal OSHA published accident data and narratives^{2,3}, which yielded no relevant accidents. Similarly, the Board staff review of the NEISS⁴ yielded no significant reported injuries attributed to MMH carts. Board staff concedes that significant injury data exists pertaining to dollies. A separate regulation addressing the design of MMH cart handles is unnecessary.

The Petitioner also request the Board adopt a regulation which requires manufacturers of MMH carts sold with loose or removable handles used in commercial applications to contact their customers to replace, phase out, or retro-fit the carts purchased. The Board's mission is to adopt reasonable and enforceable regulations, however the Petitioner has failed to establish necessity for such a specific regulation.

STAFF RECOMMENDATION

Consistent with and based upon the foregoing discussion, Board staff does not believe the Petitioners' requests are necessary. Board staff recommends the Petitioner's requests be DENIED.

² https://www.osha.gov/pls/imis/AccidentSearch.search?acc_keyword=%22hand%20truck%22&keyword_list=on
accessed on February 15, 2022.

³ https://www.osha.gov/pls/imis/AccidentSearch.search?acc_keyword=%22Cart%22&keyword_list=on
accessed on February 15, 2022.

⁴ <https://www.cpsc.gov/cgibin/NEISSQuery/home.aspx>
accessed on February 14, 2022.