

UNITED STATES DEPARTMENT OF LABOR  
Occupational Safety and Health Administration

Standup Forklift Under-ride Hazards

<https://www.osha.gov/dts/shib/shib072709.html>

Safety and Health Information Bulletin

**Preface**  
Forklift truck operators must look in the direction of travel and keep the forklift under control at all times. One of the potential hazards faced by standup forklift operators is the crushing hazard that can arise when traveling, with the forks trailing, in a warehouse near a storage rack or similar obstruction. The risk is that a horizontal rack beam (crossbar) or similar obstruction might enter the operator's compartment in a situation referred to as "under-ride." This Safety and Health Information Bulletin (SHIB) discusses ways to reduce the crushing hazard to the operator associated with under-ride. Awareness of the precautions and safety measures highlighted in this SHIB can help prevent serious injuries and fatalities related to warehouse operations.

**Purpose**  
<https://www.osha.gov/dts/shib/shib072709.html>

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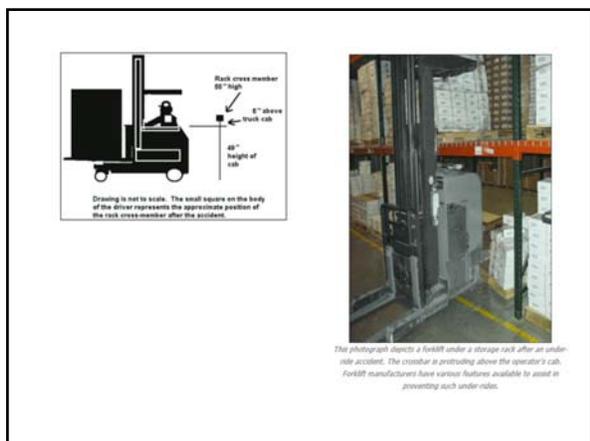
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ANSI/ITSDF B56.1-2012  
(Revision of ANSI/ITSDF B56.1-2009)



**SAFETY STANDARD  
FOR LOW LIFT AND  
HIGH LIFT TRUCKS**

- **7.30 Operator Protection for Stand-Up, End Controlled, Narrow Aisle and Counterbalanced Trucks**
- **7.30.1** Guards or other means may be provided as part of the truck to limit intrusions into the operator's area of horizontal members (e.g., rack beams), oriented generally transverse to the direction of travel.

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**4 HBAO Incidents From 2015 to 2019**

**Example:**

a) Warehouse areas - Sufficient safe clearances did not exist in some floor level storage rack slots where employees operated XXXXX standup rider forklifts in that the operator compartment and overhead guard of this forklift had heights above the floor of 50 inches and 88 inches respectively while the horizontal rack beams in racking "D" for instance had a height above the floor of 58 inches. **This would allow the horizontal rack beam at some storage locations to enter the operator compartment of the XXXXX standup style forklift, pinning the operator between the horizontal rack beam and the frame of the forklift,** on or about XXXX.

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**OSHA Fines** **\$14K After Death**

June 4, 2019 

Online was issued a fine of \$14,323 for safety hazards by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) after a worker was killed in an accident at the company's Ocala, FL distribution facility.

The worker was fatally injured during the operation of a stand-up industrial truck, according to a recent agency press release. OSHA issued citations to the company for struck-by and crushing hazards.

"Employers are required to assess and abate hazards that are present, and that may expose workers to injuries, illnesses, or fatalities," said OSHA Jacksonville Area Office Director Michelle Gonzalez in a statement. "This tragedy might have been prevented if the employer had complied with published safety standards, and adhered to hazard warnings provided by equipment manufacturers."

has 15 business days after receiving the citations to comply, contest the findings before an independent board, or request an informal conference with an OSHA area director.

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- Yale order selector  
- Raymond standup rider fo  
- Crown PC 4500 pallet truck  
- And similar equipment\*\*



Also seen with:

- Golf cart
- Zero Turn Radius (ZTR) mowers

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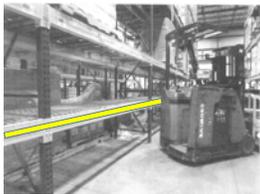
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**Recommendations to reduce the hazard**

Evaluate your worksite to determine if an under-ride hazard exists.

1. If possible, make modifications to the shelving system.

a) Adjust the shelf heights so that the body of the forklift below the operator's compartment will strike the rack in the event of contact, preventing under-ride from occurring.



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**Recommendations to reduce the hazard**

b. Adjust the shelf heights so that the forklift's overhead guard will strike the rack in the event of contact, preventing under-ride from occurring.



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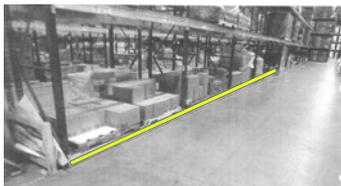
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### Recommendations to reduce the hazard

2. Install a barrier, even with the outer edge of the storage rack (such as a curb or floor level shelf), so that the bottom of the forklift will strike the curb or shelf in the event of contact, preventing an under-ride from occurring.



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### Recommendations to reduce the hazard

3. Purchase, where appropriate, standup forklifts that have corner posts, extended backrests, rear post guards, or other features to prevent an under-ride from occurring. (Specific guards or other means that enhance safe operations would be determined through cooperation between the user and manufacturer (see ANSI /ITSDF B56.1-2005, para.4.5.3, 7.30, and 7.36).)

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### Recommendations to reduce the hazard

4. Contact the manufacturer to discuss installing rear post guards or other equivalent protections that address the under-ride hazard on existing standup forklifts. These posts may be available from the forklift manufacturer. (Note that modifications and additions which affect safe operation shall not be performed by the customer or user without the manufacturer's prior written approval. [29 CFR 1910.178 \(a\)\(4\).](#))

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### Recommendations to reduce the hazard

Don't create a new hazard:

- 5. Evaluate control methods to [assure that guards do not limit visibility](#), present pinch-point hazards, or add any additional hazard to forklift operators or other employees on the site.

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### Additional Recommendations

- Reinforce the [Engineering recommendations by training](#) employees to understand the Under-Ride Hazard, how to recognize the hazard and actions needed to protect themselves.
- Train employees to operate forklifts safely as required by paragraph (l) of [29 CFR 1910.178](#), including recognizing the hazards of the workplace created by the use of the vehicles.
- Refer to the [Powered Industrial Trucks \(Forklift\) eTool](#) as a resource for information to keep employees who operate forklifts safe on the job. The eTool provides a review of potential hazards and a summary of key OSHA requirements and industry recommended practices for forklift operations.

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