



Reply to the attention of:

JUN 30 2017

MEMORANDUM FOR: REGIONAL ADMINISTRATORS AND
STATE PLAN DESIGNEES

THROUGH 
DOROTHY DOUGHERTY
Deputy Assistant Secretary

FROM: 
DEAN McKENZIE, Director
Directorate of Construction

SUBJECT: Monorail Hoists Enforcement Policies

The scope of *Cranes and Derricks in Construction* (the cranes standard, 29 CFR Part 1926, subpart CC) includes a functional definition for the equipment covered. The standard applies to “power-operated equipment, when used in construction, that can hoist, lower, and horizontally move a suspended load.” (29 CFR 1926.1400(a)). Monorail hoists are not explicitly excluded from the scope of the rule, and OSHA has issued several letters of interpretation confirming the crane standard’s coverage of specific monorail hoists in certain construction operations.

As a number of stakeholders have pointed out, the standard is not a perfect fit for monorail hoists, and OSHA intends to consider rulemaking options to address this issue. The purpose of this memorandum is to announce a temporary enforcement policy pending the resolution of that rulemaking process.

Most monorail hoist systems have a completely fixed monorail (I-beam). When used in construction, these hoisting systems are typically mounted on equipment such as work vehicles, trailers, and scaffolding systems. The monorails can be extended and contracted in only a fixed horizontal direction to hoist materials and can only hoist them as high as the monorail. Some examples of materials commonly lifted and placed by monorail hoists during construction are precast concrete components (septic tanks, storm drain and sewer conduits, vaults, etc.); storage tanks (propane, oil, etc.); mechanical components (engines, commercial generators, etc.); trade specific components (electrical transformers, industrial spooled materials, sewer lids, etc.); and temporary storage units.

Monorail hoists present unique issues. Many monorail hoist manufacturers do not design their systems to meet any particular criteria recommended in consensus standards, though the designs of their hoisting mechanisms most resemble those of overhead hoists covered by ASME B30.17-2015 (Cranes and Monorails (With Underhung Trolley or Bridge)).

Stakeholders have pointed out that a number of the provisions of the crane standard add very little protection when these monorail hoists are used. For example, the stakeholders have told OSHA that because these monorails are fixed such that they do not angle up or down, the equipment does not warrant the elevated level of protections from power line contact required by the crane standard. They also note that monorails cannot boom out significantly beyond the wheelbase of a vehicle or the base of its supporting structure, and thus the hoisting equipment does not pose the dangerous cantilevering and stability hazards that are addressed by requirements of the crane standard. Furthermore, they assert that there is no need for specific protections from hazards posed by booming out loads, boom free fall, equipment swing radius, or any crane-related hazards that would necessitate the use of devices like level indicators, boom/jib stops, boom/jib limiting devices, boom length/radius indicators, and drum hoist rotation indicators. Finally, stakeholders have pointed out that the loads handled by monorail hoists are not heavy enough to trigger the need for a load weighing device or the use of load charts to prevent overloading and tipping the hoisting equipment.

However, it is clear that monorail and overhead hoist systems present recognized workplace hazards, including those addressed by 29 CFR 1926.554 (Overhead hoists), ASME B30.17, and various manufacturers' recommendations. For the reasons discussed above, and until the application of the cranes standard to monorail hoists is revisited through rulemaking, OSHA intends to exercise its enforcement discretion by not citing employers for failing to achieve full compliance with the cranes standard when monorail hoists are used, if the following conditions are met to protect employees:

For Construction Applications

- (1) Compliance with 29 CFR 1926.554 (Overhead hoists). OSHA notes that its Overhead Hoist standard requires the use of outriggers and other supports whenever prescribed by the manufacturer.
- (2) Operators of this equipment are trained in accordance with 29 CFR 1926.21.
- (3) The employer has determined that each operator is qualified to safely operate that hoisting system per 29 CFR 1926.20(b)(4).
- (4) When monorail hoists are mounted on equipment such as work vehicles, utility trailers, scaffolding systems (including mast climbing), and various other mobile or stationary support systems, the employer must also comply with all other OSHA construction requirements that are applicable to each supporting vehicle, equipment, and structure.

Should an employer operating such equipment fail to comply fully with all of the requirements described, the requirements of the cranes standard would apply.

For General Industry Applications

OSHA’s longstanding policy regarding monorail hoists in general industry work is that they are not covered by a specific general industry standard, so employers must protect employees from the hazards of this equipment in accordance with Section 5(a)(1) (the general duty clause) of the Occupational Safety and Health Act (see OSHA’s letter to Mr. Neal R. Khein, Jr. (Feb. 12, 1991) and memo to James Lake (April 23, 1984), both available at www.osha.gov). The general duty clause requires employers to use this equipment in a manner that would be considered safe in the industry. One means of doing so would be to comply with the four requirements detailed in the policy above, and another means of doing so would be to comply with the safety standards recognized in the industry, including the relevant portions of ASME B30.17-2015 (Cranes and Monorails (With Underhung Trolley or Bridge)).

Description of Equipment Covered by these Enforcement Policies

For the purposes of this enforcement policy, a monorail hoist means a hoisting mechanism attached to a completely fixed monorail (I-beam) mounted on equipment such as work vehicles, trailers, or scaffolding systems. The monorail hoists can be extended and contracted in only a fixed horizontal direction to hoist materials and can hoist materials only as high as the monorail. The monorail hoist does not have a rotating superstructure and cannot swing on a hinge or boom out significantly beyond the wheelbase of a vehicle or the base of its supporting structure. Examples of these systems are pictured in the attachment.

Attachment:

Examples of Monorail Hoists Covered by this Policy

Photo 1: Septic Tank Delivery Rig



Photo Courtesy of the National Precast Concrete Association

Photo 2: Septic Tank Delivery Rig



Photo Courtesy of the National Precast Concrete Association

Photo 3: Septic Tank Delivery Rig



Photo Courtesy of the National Precast Concrete Association

Photo 4: Burial Vault Delivery Rig



Photo Courtesy of the Roberts Vault Co. Inc.

Photo 5: Vault Handler



Photo Courtesy of the Axis Corporation

Photo 6: Propane Tank Handler



Photo Courtesy of the Fisk Tank Carriers/G.D. Roberts Company Inc.

Photo 7: Work Vehicle Mounted Monorail Hoist



Photo Courtesy of Smak Industrial Handling Solutions

Photo 8: Work Vehicle Mounted Monorail Hoist



Photo Courtesy of Smak Industrial Handling Solutions

Photo 9: Mast Climber with Non-Swinging Mounted Monorail Hoist



Photo Courtesy of Hydro Mobile