

Urgent Bulletin

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Title: Improper Use of Man Lift Leads to Operator Fatality

Date: October 3, 2006

Identifier: 2006-RL-HNF-0041

Lessons Learned Summary: Use of equipment for performing work other than what it was intended or designed for can even be fatal.

Discussion of Activities: While operating a JLG brand aerial lift (man lift), a British Petroleum (BP) contractor employee was fatally injured when he was compressed between the platform control panel of the lift and a 10 inch I-beam. Although there were three co-workers in the area, there are no known eye witnesses to the actions leading up to and causing the fatality. According to testimony, the equipment operator was found in a compromised position by the co-workers.

The crew was involved in the task of installing and welding structural steel about 10 meters off the ground. A man lift was used to access the area, transport tools and materials, and facilitate setting and tightening bolts.

Analysis: What Went Wrong?

1. The equipment operator maneuvered the man lift into a location which had numerous obstacles – it was a very tight space. There were only a few inches of clearance between the basket and the upper and lower I-beams. The immediate overhead obstruction required the equipment operator to lean forward/crouch/stoop in the basket to avoid being pinned between the control panel and the I-beam.
2. The equipment operator engaged the man lift controls at a speed and direction that pushed him into the I-Beam. The speed control knob was found to be at the highest possible speed which is improper when operating equipment where there are numerous obstacles and tight spaces. The safety interlock (locking ring below the handle) on the main lift/swing joystick located in the platform's control panel was circumvented and could allow the joystick to be engaged unintentionally.
3. The equipment operator used the man lift improperly throughout the day and applied a vertical force to the basket prior to the final incident.

Immediate and System Causes:

The equipment operator used poor judgment in accessing the structure from the least accessible side when other options were available.



The man lift (pictured in orange) had very little room to maneuver between the I-beams (pictured in grey.) Prior to the incident, the equipment operator used the man lift to apply a force on the beam.



The picture shows the basket of the man lift on the ground. The equipment operator tried to maneuver the basket between the upper I-beam and the lower I-beam.

There were rules violations which did not directly contribute to the incident, but showed a pattern of non-compliance by the work crew. Test documentation and employment agreements indicate that the equipment operator had adequate knowledge that these actions were violations of acceptable practices, ANSI/OSHA standards and the contractor's company policies. There was inadequate oversight and reinforcement of these critical behaviors.

Recommendations: BP Texas City has updated its man lift policy, hazard assessment form and a pre-use inspection record to remind workers and supervisors that the equipment needs to be in proper working order and that equipment should be used only for its intended use (i.e. ensure safety devices are functional, do not exceed load capacity, etc.)

Cost Savings/Avoidance: NA

Work Function: Operations-Heavy Equipment

Hazards: Mechanical Injury

Keywords: Man lift, fatality

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References: BP Texas City Site Communication One Page Summary of Incident Investigation Report, July 21, 2006

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