

Hazard Information Bulletin



U.S. Department of Labor
Occupational Safety and Health Administration

HIB 00-5-23

Emergency Lowering Procedure for SKYJACK SJM SERIES Self-Propelled Mobile Work Platforms with Hydraulic Velocity Fuses

Purpose

The purpose of this Hazard Information Bulletin is:

1. To alert users of SKYJACK SJM self-propelled mobile work platforms, which are equipped with hydraulic velocity fuses, that the platform may lock up when the base control valve for emergency lowering of the platform is manually turned quickly more than 1/8 of a turn;
2. To inform the users about engineering modifications that can be made to correct this condition; and
3. To provide recommendations for employers that own the subject mobile work platforms.

Background

The Division of Occupational Safety and Health, Department of Industrial Relations of the State of California (Cal/OSHA), investigated a fatal accident at a facility in San Diego, California and discovered a potentially hazardous condition on the subject mobile work platforms. Cal/OSHA informed OSHA's San Francisco Regional Office, and that office forwarded the information to the Directorate of Technical Support for review.

Description of Hazard

The SJM Series Self-Propelled Mobile Elevating Work Platform is equipped with a hydraulic velocity fuse which prevents inadvertent lowering of the platform in the event of hydraulic line failure. However, this feature can also activate and prevent the platform from descending if the emergency lowering rotary valve is opened too quickly.

This HIB is not a new standard or regulation, and it creates no new legal obligations. It is advisory in nature, informational in content, and is intended to assist employers in providing a safe and healthful workplace.

For a fuller description of the nature and effect of Hazard Information Bulletins, see the Important Information box at the end of this bulletin.

During a rescue operation following an accident at a facility in San Diego, California, workers unsuccessfully tried to lower a subject work platform using the base controls. In the subsequent joint investigation by Cal/OSHA and the employer, it was discovered that, if the manual emergency lowering rotary valve is opened too quickly, and opened more than approximately 1/8 of a turn, the hydraulic fuse can lock and prevent the lowering of the platform. The manufacturer later stated that the hydraulic fuse may lock if the valve is opened too quickly and one of the following conditions also exists: lowering from the top end of the hydraulic stroke, lowering an overload, or when using high viscosity oil in cold temperatures.

The instruction for emergency lowering of the platform in the Operating Manual of the SKYJACK SJM Series Self-Propelled Mobile Work Platform does not mention that the lowering mechanism can lock up if the emergency lowering rotary valve is opened too quickly nor is there a warning sign next to the valve.

Conclusions

When an accident occurs and it is necessary to lower the platform, many workers may be inclined to open the emergency lowering rotary valve as quickly as possible. However, this may lock up the lowering mechanism and create an unsafe condition. Steps should be taken so that the safety feature, which prevents inadvertent lowering of the platform in the event of hydraulic line failure, will not be activated by the rapid opening of the emergency lowering rotary valve. Controlled, reliable lowering of the platform under emergency conditions is essential to the safe operation of the equipment.

Recommendations

To prevent the SKYJACK SJM Series Self-Propelled Mobile Work Platforms with hydraulic velocity fuses from locking up when being manually lowered, an engineered solution that would not compromise any other safety feature of the platform is recommended. Modification of an aerial platform, however, shall be made only with prior written permission from the manufacturer. SKYJACK, Inc. has approved the modifications developed by one employer who installed fittings to restrict the flow of hydraulic fluid through the emergency lowering valve, and thus prevented the hydraulic fuse from being activated when lowering the platform. The employer at the facility where the accident occurred has stated that they have successfully modified twelve units using this method. For further information about this modification, please contact SKYJACK, Inc. at (519) 837 - 0888. Until such fittings can be installed, clear instruction and warning signs to open the valve no more than 1/8 turn should be affixed next to the valve. The warning signs, however, are not appropriate substitutes for an engineered solution.

Important Information on the Nature and Effect of Hazard Information Bulletins

The Directorate of Technical Support issues Hazard Information Bulletins (HIBs) in accordance with OSHA Instruction CPL 2.65 to provide relevant information regarding unrecognized or misunderstood health and safety hazards, as well as potential hazards associated with particular materials, devices, techniques, and engineering controls. HIBs are initiated based on information provided by the field staff, studies, reports, and concerns expressed by safety and health professionals, employers, employees and their representatives, and the public. HIBs are developed based on a thorough evaluation of available facts and in coordination with appropriate parties.

The *Occupational Safety and Health Act* requires employers to comply with hazard-specific safety and health standards. In addition, employers must provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm under Section 5(a)(1), the General Duty Clause of the Act. Employers can be cited for violating the General Duty Clause if there is a recognized hazard and they do not take steps to prevent or abate the hazard. However, failure to implement HIB recommendations is not, in itself, a violation of the General Duty Clause. Citations can only be based on standards, regulations, and the General Duty Clause.