



Instructions

Fall Arrest Guidance Booms

Part No. 233990
Rev B

Genie Self-propelled Boom Products and Fall Arrest Guidance

Background

Booms are designed to carry personnel to elevated work locations at height. A personal fall protection system in addition to the platform guard rails is required by OSHA in the United States and other regulatory agencies in many parts of the world. Personal fall protection can consist of a fall restraint and/or fall arrest system. Depending on the work being performed either a fall restraint system or a fall arrest system should be selected while in the platform. Sometimes work must be performed by stepping out of the basket onto an adjacent structure. If the adjacent structure is not equipped to provide appropriate fall protection, the Genie boom may be used as a fall arrest anchor.

This document provides guidance for the use of Genie Booms to serve as fall arrest anchorages.

Definitions

Fall Restraint Systems

Restraint systems prevent a worker from being exposed to a fall. If the employee is protected by a restraint system, either a body belt or a harness may be used. When a restraint system is used for fall protection in a boom supported aerial work platform, the employer/user/operator must ensure that the lanyard and anchor are arranged so that the operator is not exposed to falling any distance outside the platform.

Fall Arrest Systems

A system that permits an arrested fall is considered a fall arrest system. A body belt is prohibited in a fall arrest system and instead a full body harness and lanyard that limits the fall distance and arresting force on the person is required. Fall arresting lanyards typically have a shock absorbing section or are a self-retracting lifeline/lanyard.

Self-retracting lifeline/lanyard

A deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which after onset of a fall, automatically locks the drum and arrests the fall. The use of the self-retracting lifeline/lanyard as a fall arrest lanyard is allowed on boom-supported aerial work platforms. If a self-retracting lifeline/lanyard is used while exiting the platform it shall not allow a free fall greater than six feet.

Personal Fall Protection Preference

When designing a work space/condition the order of preference for fall protection is:

- 1 Fall restraint - Prevent the occurrence of a fall
- 2 Fall arrest - Reduce injuries occurring during the fall

Genie Self-propelled Booms may be used as a fall arrest anchor including working outside of the platform under the following guidelines:

- 1 The owner/employer/user/operator of the boom is responsible for providing fall protection for boom operators.
- 2 A "qualified person" with knowledge of fall protection regulations and systems must design the work space and the fall arrest system to insure worker safety. A "qualified person" as used above is one who, by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training and experience, has demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.
- 3 Genie Booms have been stability tested on level ground for a 300 lb person experiencing fall arrest with the remaining rated load in the platform. Therefore the weight of the worker, including tools and equipment, exiting the platform while attached to one of the platform's lanyard anchorages must not exceed 300 lbs.

- 4 Only one person may exit the platform while attached to the platform's lanyard anchorage.
- 5 Employers and operators must be aware of and plan for potential vertical and horizontal platform movement while exiting or entering an elevated boom platform.
- 6 The boom must be on firm level ground to be considered useable as a fall arrest anchorage.
- 7 A person trained in the operation of the Genie boom shall remain on the ground near the machine base controls to prevent unauthorized use and to prevent the machine from being operated while used as a fall arrest anchor.
- 8 The fall protection system must comply with all applicable local, provincial, federal, job site, and manufacturer's requirements for the use of personal fall protection equipment.
- 9 Do not operate the boom once an operator has tied off and exited the platform.
- 10 When designing fall arrest systems the following should be taken into account:
 - Lanyard free fall distance
 - Maximum allowable deceleration distance
 - Maximum lock-up length (for the self-retracting lifeline/lanyard only)
 - Any stretch in the lifeline or lanyard outside of the deceleration distance.
 - The height of the operator
 - Any harness effects including self-retracting lanyards
 - Safety factor (a suitable amount to ensure that the required clearance between the operator and the lower surface is met)
 - Any movement of the platform due to dynamic loading
 - Any obstructions under the platform
 - Any other traffic or distractions that could affect safety

Owner/Employer/User/Operator Requirements:

- 1 Operators must be trained and qualified on safe operation of the equipment, and be familiar with the specific model of Genie equipment as follows:
 - Be familiar and comply with the equipment operating and safety manuals, decals and warnings.
 - Understand all control functions.
 - Be aware of and understand all safety devices specific to the equipment being used.
 - Be instructed how to avoid the hazards.
- 2 Comply with all applicable jobsite, local, state, provincial, and federal rules and regulations, and standards related to the use of the equipment.
- 3 The equipment must be in proper working condition and configuration.

In consideration for Genie's guidance herein, the equipment owner, employer, user and operator hereby agree to indemnify and hold harmless Terex USA and its parent and affiliated companies against any and all liabilities, claims, suits, losses, costs and legal fees caused by, arising out of, or resulting from any negligent act or omission in the operation of the equipment; the failure to comply with the criteria set forth in this letter related to the use of a boom as a Fall Arrest anchorage; the safety rules and operating instructions in the Operator's Manual. **By proceeding with the use of a boom as a Fall Arrest anchorage, you agree to adhere to the requirements set forth herein, including said indemnification. If you do not agree, do not proceed with the proposed use.**