



NYC Buildings Department
280 Broadway, New York, NY 10007

Robert D. LiMandri, Commissioner



BUILDINGS BULLETIN 2013-009 OTCR

Supersedes: None

Issuer: Alan Price, PE
Director, Office of Technical Certification & Research

Issuance Date: June 21, 2013

Purpose: This document establishes acceptance criteria for attendant operated automobile parking lifts installed in accordance with the 2008 NYC Construction Codes.

Related Code/Zoning Section(s):
AC 113.2.3
BC 406

Subject(s): Parking, stackers; Parking, attendant operated parking lifts; Parking, mechanical access parking

Background: This bulletin establishes testing and acceptance criteria for attendant operated automobile parking lifts in accordance with the 2008 NYC Construction Codes. This bulletin does not cover zoning, construction classification, and sprinkler requirement for mechanical access parking equipment.

The attendant operated automobile parking lift is constructed of standard structural steel sections, bolted or welded together to provide a frame. This bulletin addresses attendant operated automobile parking lifts with one, two or three platforms that are elevated with a maximum of one vehicle on each platform. The parking lift may be installed outdoors or indoors. The lifting mechanism is either electrically driven with a motor connected to a power supply or hydraulically driven connected to a reservoir of hydraulic fluid.

Uses: The attendant operated automobile parking lift is a mechanical device designed to lift standard automobile vehicles or sport utility vehicles with a maximum weight of 6,000 pounds used to provide additional parking spaces.

Evaluation Scope: 2008 NYC Construction Codes

Evaluation Criteria: Pursuant to section AC 28-113, the Office of Technical Certification and Research establishes criteria for testing and evaluation of attendant operated automobile parking lift in accordance with the following test protocol:

Testing Protocol

1. Safety Factor.
Testing protocol shall be based on a maximum expected platform load of 6000 lbs. which corresponds to the load of a sport utility vehicle. Therefore each vehicle platform shall be loaded with 12,000 lbs. for a safety factor of 2.
2. Loading Requirements.
Each platform shall be loaded in the safety locking position.
 - a For a 4 level parking lift (three raised platforms), each platform above ground level shall be loaded with 12,000 pounds. Additionally, each raised platform shall be subjected to a horizontal force of 1,000 pounds applied simultaneously with the vertical load. Total loading for the test is 36,000 pounds of vertical force plus 3,000 pounds of horizontal force applied to the raised platforms.
 - b For a 3 level parking lift (two raised platforms), each platform above the ground level shall be loaded with 12,000 pounds. Additionally, each raised platform shall be subjected to horizontal force of 1,000 pounds applied simultaneously with vertical load. Total loading for the test is 24,000 pounds of vertical force plus 2,000 pounds of horizontal force applied to the raised platform.
 - c For a 2 level parking lift (one raised platform), the platform above the ground level shall be loaded with 12,000 pounds. Additionally the raised platform shall be subjected to horizontal force of 1,000 pounds.
3. Conditions of testing acceptance.
Maximum permitted deflection shall include the following:
 - a. 2 level lifts - The raised vehicle sits on a double-cantilever platform, with one pair of the vehicle's wheels on the short cantilever and the other pair of wheels on the longer cantilever. The deflection in the longest cantilever, in the raised position shall not exceed 1 on 180.
 - b. 3 level and 4 level lifts. Raised vehicles sit on platforms supported at their four corners by posts. The deflection at the center of the platform shall not exceed 1 on 500.

Acceptable attendant operated automobile parking lifts shall be tested and evaluated by a New York State professional engineer or approved testing agency and shall comply with the conditions of this bulletin. The NYS professional engineer or approved testing agency shall prepare a report with all testing and evaluation data and shall prepare a certification that all design, framing members, bracing connections, platforms, etc. meet the requirements of the New York City Construction Codes. The manufacturer and the New York State professional engineer or approved testing agency shall maintain all testing, evaluation and certification records.

Conditions of Acceptance: Attendant operated automobile parking lifts shall be designed and installed in accordance with the 2008 NYC Construction Codes and other applicable provisions including but not limited to the following:

A. Design

1. Attendant operated automobile parking lifts shall be specified in accordance with the manufacturer's specification and the conditions of the testing.
2. Attendant operated automobile parking lifts shall be operated only by parking attendant.

B. Equipment installation requirements

1. Installation requirements shall be in accordance with the manufacturer's instructions, for the installed product, and the conditions of this bulletin.

C. Inspection:

1. Pursuant to section BC 1704.13, the installation of attendant operated automobile parking lift shall be subject to special inspection requirements of Chapter 17 of the Building Code and Department Rules covering special inspection. Special Inspectors of attendant operated automatic parking lifts shall:
 - a. Maintain the same qualification requirements for the special inspection for mechanical system category as defined in 1 RCNY section 101-06, appendix A.
 - b. Verify that the equipment installed is the same model which was tested and it meets all the requirements and conditions of the testing and evaluation certification.
 - c. Complete the statement of special inspection by referencing this bulletin under the Special Inspection Item for "Alternate Material" in section 3.0 of the TR1 form.

<input type="checkbox"/>	<input type="checkbox"/>	Wood - Installation of Metal-Plate-Connected Trusses	BC 1704.6.3		
<input type="checkbox"/>	<input type="checkbox"/>	Wood - Installation of Prefabricated I-Joists	BC 1704.6.4		
<input type="checkbox"/>	<input type="checkbox"/>	Soils - Site Preparation	BC 1704.7.1		
<input type="checkbox"/>	<input type="checkbox"/>	Soils - Fill placement & In-Place Density	BC 1704.7.2, BC 1704.7.3		
<input type="checkbox"/>	<input type="checkbox"/>	Soils - Investigations (Borings/Test Pits)	TR4	BC 1704.7.4	
<input type="checkbox"/>	<input type="checkbox"/>	Pile Foundations & Drilled Pier Installation	TR5	BC 1704.8	
<input type="checkbox"/>	<input type="checkbox"/>	Pier Foundations		BC 1704.9	
<input type="checkbox"/>	<input type="checkbox"/>	Underpinning		BC 1704.10	
<input type="checkbox"/>	<input type="checkbox"/>	Wall Panels, Curtain Walls, and Veneers		BC 1704.11	
<input type="checkbox"/>	<input type="checkbox"/>	Sprayed Fire-Resistant Materials		BC 1704.12	
<input type="checkbox"/>	<input type="checkbox"/>	Exterior Insulation Finish Systems (EIFS)		BC 1704.12	
<input type="checkbox"/>	<input type="checkbox"/>	Alternative Materials - OTCR Buildings Bulletin # 2013-009		BC 1704.13	
<input type="checkbox"/>	<input type="checkbox"/>	Smoke Control Systems		BC 1704.14	
<input type="checkbox"/>	<input type="checkbox"/>			BC 1704.15	

Use this line to identify attendant operated automobile parking lifts.