

ANSI/SIA A92.8 - 2006

AMERICAN NATIONAL STANDARD

for

**Vehicle-Mounted Bridge Inspection
and Maintenance Devices**



American National Standards Institute
11 West 42nd Street
New York, New York 10036

Date of Publication: May 14, 2007

This Standard was approved by ANSI on December 12, 2006.

The design, manufacturing, and remanufacturing requirements of this standard apply to all Vehicle - Mounted Bridge Inspection and Maintenance Devices manufactured or remanufactured or after the effective date. All other provisions of this standard apply to both new and existing units delivered by sale, lease, rental or for any form of beneficial use on or after the effective date.

The effective date is established by the standards developer and not by the American National Standards Institute.

This standard was developed under procedures accredited as meeting the criteria for American National Standards. The Consensus Committee that approved the standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed standard was made available for public review and comment which provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

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**ANSI/SIA
A92.8-2006**

Revision of
ANSI A92.8-1993

**AMERICAN NATIONAL STANDARD
for VEHICLE-MOUNTED
BRIDGE INSPECTION AND
MAINTENANCE DEVICES**

Secretariat
Scaffold Industry Association, Inc.

Approved December 12, 2006
American National Standards Institute, Inc.

American National Standard

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Foreword

This Foreword is not part of American National Standard for Vehicle-Mounted Bridge Inspection and Maintenance Devices, ANSI/SIA A92.8-2006.

This standard is one of a series on aerial platforms developed under the committee procedures of the American National Standards Institute. The A92 standards committee was organized by the Institute in 1948. The Scaffold Industry Association, Inc. serves as Secretariat.

The primary objective of this standard is to prevent accidents associated with the use of Vehicle-Mounted Bridge Inspection and Maintenance Devices by establishing requirements for design, manufacture, installation, maintenance, performance, use and training.

This revision to ANSI/SIA A92.8 separately addresses each entity to clearly define responsibilities. Care was taken to provide consistency between this and other A92 standards. Definitions have been expanded to clarify interpretation.

Interpretations and Suggestions for Improvement

All inquiries requesting interpretation of the Committee's approved American National Standards must be in writing and directed to the Secretariat. The A92 Committee shall approve the interpretation before submission to the inquirer. No one but the A92 Committee is authorized to provide any interpretation of this standard.

The A92 Committee solicits comments on and criticism of the requirements of the standards. The standards will be revised from time to time where necessary or desirable, as demonstrated by the experience gained from the application of the standards. Proposals for improvement of this standard will be welcome. Proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed rationale for the proposal including any pertinent documentation.

All requests for interpretation and all suggestions for improvement shall be forwarded in writing to the ASC A92 Committee, c/o Secretariat ~ Scaffold Industry Association, 2001 East Campbell Avenue, Ste 101, Phoenix, AZ, 85016.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee Aerial Platforms, A92. The ASC A92 committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time the ASC A92 committee approved this standard, the A92 Aerial Platforms Committee had the following members:

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American National Standard For Vehicle-Mounted Bridge Inspection and Maintenance Devices

1 Introduction Mobile units covered by this standard are generally designed to be supported on bridge surfaces of varying degrees of grade and super-elevation and have the capability of providing personnel quick and easy access to the underside of such structures.

The rapid development of a wide variety of trailer and truck-mounted mobile unit designs necessitates the establishment of standards for their design, manufacture, remanufacture, installation, performance, inspection, training, maintenance, testing and use.

Normally, they are not insulated for use near electrically energized apparatus nor are they intended to be used in hazardous locations. Any mobile unit intended for use around energized electrical apparatus shall be designed, manufactured, and used in accordance with the requirements outlined in ANSI/SIA A92.2-2001, Vehicle-Mounted Elevating and Rotating Aerial Devices.

The operation of any mobile unit is subject to certain hazards that can be protected against only by the exercise of intelligence, care, and common sense and not by mechanical means. It is essential to have competent, careful personnel trained in the intended use, safe operation, maintenance and service of this type of equipment.

2 Scope, Purpose and Requirements

2.1 Scope

2.1.1 Equipment covered. This Standard applies to mobile units capable of positioning a platform alongside or beneath a bridge deck or equivalent structure while being supported from such structure and are used to position personnel, along with their necessary tools and materials, at work locations. Typical examples of this type of equipment are shown in Figure 1 on page 48.

2.1.2 Equipment not covered. The scope of this standard does not include the following equipment:
Ladder and ladder stands such as those covered in American National Standards for Ladder and Ladder Stands, ANSI A14 series
Scaffolding such as those covered in American National Standard for Scaffolding Safety Requirements, ANSI A10.8 - 2001
Vehicle and trailer mounted Elevating and Rotating Mobile units such as those covered in American National

Standard for the Vehicle-Mounted Elevating and Rotating Aerial Devices, ANSI/SIA A92.2 - 2001

Non-self-propelled elevating mobile unit such as those covered in American National Standard for Manually Propelled Elevating Aerial Platforms, ANSI/SIA A92.3 - 2006

Self-propelled elevating mobile units such as those covered in American National Standard for Boom-Supported Elevating Work Platforms, ANSI/SIA A92.5 - 2006 and

Self-Propelled Elevating Work Platforms, ANSI/SIA A92.6 - 2006

Vehicle-mounted vertical lift devices such as those covered in American National Standard for Airline Ground Support Vehicle-Mounted Vertical Lift Devices, ANSI/SIA A92.7 - 1990 (Reaffirmed 1998)

Mast climbing work platforms such as those covered in American National Standard for Mast Climbing Work Platforms, ANSI/SIA A92.9 - 1993

Suspended powered platforms for exterior building maintenance such as those covered in Suspended Power Platforms for Exterior Building Maintenance, ANSI A120.1 - 2001

Vertically adjustable equipment used primarily to raise and lower materials and equipment from one elevation to another as in ANSI A17, B30, and B56 series

Fire fighting equipment such as covered in Automotive Fire Apparatus ANSI/NFPA 1901- 2003

Construction and demolition digger derricks such as those covered in American National Standard for Construction and Demolition Safety Requirements, Definitions, and Specifications, ANSI A10.31 - 2006

Mobile and Locomotive Truck Cranes, ANSI/ASME B30.5 - 2004 with Supplements "A" and "B"

Personnel carrying attachments associated with cranes such as those covered in ANSI/ ASME B30.23- 2005

Personnel Lifting (platforms attached to the crane boom or suspended by hooks).

2.2 Purpose. This Standard applies to the establishment of criteria for design, manufacture, remanufacture, rebuild/recondition, testing, inspection, installation, maintenance, use, training, and operation of Vehicle-Mounted Bridge Inspection and Maintenance Devices, primarily used to position personnel, to achieve the following objectives:

- (1) Prevention of personal injuries and accidents;
- (2) Establishment of criteria for design, manufacture, remanufacture, installation, rebuild/recondition,

testing, performance, inspection, training, maintenance, and operation;

- (3) Establishment and understanding by designers, manufacturers, remanufacturers, installers, dealers, owners, users, operators, lessees, lessors and brokers of their respective responsibilities.

2.2.1 Effective Dates. This Standard will become effective November 14, 2007 as follows:

- (1) Design, manufacture and remanufacture requirements. The design and manufacturing requirements of this Standard will apply to all mobile units manufactured on or after the effective date. Bridge Inspection and Maintenance Devices remanufactured on or after the effective date of this Standard shall comply with the requirements of this Standard.
- (2) Rebuilt/reconditioned Bridge Inspection and Maintenance Devices shall comply with the standard in effect as of the date of their original manufacture.
- (3) Installation Requirements. The installation requirements of this Standard apply to all Bridge Inspection and Maintenance Devices installed on or after the effective date.
- (4) Responsibilities for installers, dealers, owners, users, operators, lessors, lessees, and brokers. All provisions detailed for dealers, owners, users, operators, lessors, lessees, and brokers apply to both new and existing units delivered by sale, lease, rental, or any form of beneficial use on or after the effective date.

2.3 Requirements. The requirements of this Standard shall be met or exceeded.

3 Referenced and related American National Standards and Scaffold Industry Association publications

3.1 Referenced American National Standards. This standard is intended to be used in conjunction with the following American National Standards. When these referenced standards are superseded by a revision approved by the American National Standards Institute, the revision shall apply:
ANSI/SIA A92.2 - 2001, Vehicle-Mounted Elevating and Rotating Aerial Devices
ANSI Z535.1 - 2002, Safety Color Code
ANSI Z535.3 - 2002, Criteria for Safety Symbols
ANSI Z535.4 - 2002, Product Safety Signs and Labels

ANSI/AWS D 1.1 - 2004, Structural Welding Code Steel
ANSI/AWS D1.2 - 2003, Structural Welding Code Aluminum
ANSI/NFPA 58 - 1999, Storage and Handling of Liquefied Petroleum Gases
ANSI/NFPA 70 - 1995, National Electrical Code
ANSI/NFPA 505-1996, Powered Industrial Trucks, Including Type Designations, Areas of Use, Maintenance, and Operation

3.2 Other referenced Standards and Regulations. This Standard is also intended to be used in conjunction with the following standards:
SAE J821 - 1985 for Electrical Systems for Construction, Agriculture and Off-Road Machines
Code of Federal Regulations (CFR) 1910.333

3.3 Related American National Standards. The standards listed here are for information only and are not essential for the completion of the requirements of this Standard. Where these related Standards are superseded by a revision approved by the American Standards Institute, the revision shall apply.
ANSI A10.4 - 1990, Personnel Hoists
ANSI A10.8 - 2001, Safety Requirements for Scaffolding
ANSI A10.31 - 2006, Safety Requirements, Definitions, and Specifications for Digger Derricks
ANSI-SIA A92.2 – 2001, Vehicle-Mounted Elevating and Rotating Aerial Platforms
ANSI/SIA A92.3 - 2006, Manually Propelled Elevating Aerial Platforms
ANSI/SIA A92.5 - 2006, Boom-Supported Elevating Work Platforms
ANSI/SIA A92.6 - 2006, Self-Propelled Elevating Work Platforms
ANSI/SIA A92.7 - 1990, Airline Ground Support Vehicle-Mounted Vertical Lift Devices (Reaffirmed – 1998)
ANSI/SIA A92.9 - 1993, Mast Climbing Work Platforms
ANSI A120.1 - 1996, Suspended Powered Platforms for Exterior Building Maintenance
ANSI/NFPA 1901 - 2003, Automotive Fire Apparatus

3.4 Referenced Scaffold Industry Association publication(s). The following publication contains the definitions and requirements of this Standard for the entities identified:

ANSI/SIA A92.8 - 2006, Manual of Responsibilities for Installers, Dealers, Owners, Users, Operators, Lessors, Lessees and Brokers of Vehicle-Mounted Bridge Inspection and Maintenance Devices

3.5 Related Scaffold Industry Association

publication(s). The publications listed here are for information only and are not essential for the completion of the requirements of this standard.

ANSI/SIA A92.2 – 2001, Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors, and Lessees of Vehicle-Mounted Elevating and Rotating Aerial Platforms

ANSI/SIA A92.3 - 2006, Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors, Lessees, and Brokers of Manually Propelled Elevating Aerial Platforms.

ANSI/SIA A92.5 - 2006, Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors, Lessees, and Brokers of Boom-Supported Elevating Work Platforms.

ANSI/SIA A92.6 - 2006, Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors, Lessees, and Brokers of Self-Propelled Elevating Work Platforms.

ANSI/SIA A92.9 - 1993, Manual of Responsibilities for Dealers, Owners, Lessors, and Lessees of Mast-Climbing Work Platforms.

4 Definitions

Anchorage(s): A secure point of attachment to be used with personal fall protection equipment (PFPE).

Authorized personnel (authorized person): Personnel approved or assigned to perform a specific type of duty or duties at specific location or locations at a work site.

Base: The relevant contact points of the mobile unit that form the stability fulcrum (e.g. wheels, outriggers, and stabilizers).

Bridge Inspection and Maintenance Device: All components of the mobile unit less the chassis (vehicle). Such components include, but are not limited to, the power plant (if any), positioning assembly, platform, and stabilizers or outriggers (if any).

Broker: An independent business entity or person who arranges a lease or transfer of ownership of a mobile unit, but does not own the mobile unit. If the entity or person is an employee of the buyer, seller, lessor or lessee of the mobile unit, he/she shall not be considered a broker.

Chassis (vehicle): The integral part of the mobile unit on which the Bridge Inspection and Maintenance Device is mounted such as a truck, a trailer or an all-terrain vehicle, and provides mobility and support for the positioning assembly.

Configuration: All positions in which a mobile unit or any part thereof can be placed within its intended operating limits.

Critical components: Load supporting elements which support or stabilize the platform of the Bridge Inspection and Maintenance Device.

Dealer: A person or entity who buys from a manufacturer or distributor and who generally sells, rents, and services mobile units.

Delivery: Transfer of care, control, and custody of the mobile unit from one person or entity to another person or entity.

Directional controls: Controls that initiate functions that affect movement of the platform or the mobile unit.

Ductile materials: Materials that have a minimum elongation at failure of 10% in 2 inches (50.8 mm) gauge length based on a standardized test specimen.

Effective horizontal working range: Such horizontal measurements shall be from the edge of the supporting structure to the far end of the platform when the platform is positioned 90 degrees relative to the longitudinal axis of the supporting structure.

Employer: Any person, firm, partnership, association of persons or corporations or their legal representatives that make contracts of employment and have the right to direct and control work activities.

Equivalent entity: An organization, agency, or individual who, by possession of an appropriate technical degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with the problems relating to the subject matter, the work, or the project.

Familiarization: Providing information regarding the location of the weather resistant compartment for storage of manuals, control functions, operational limits, and safety devices for the mobile unit to a qualified person or