AMERICAN NATIONAL STANDARD

ANSI/ASSE A10.40-2007
Reduction of Musculoskeletal Problems in Construction

American National Standard for Construction and Demolition Operations

ANSI/ASSE A10.40-2007

AMERICAN SOCIETY OF SAFETY ENGINEERS

ANSI®
ANSI A10.40 – 2007

American National Standard
Construction and Demolition Operations

Reduction of Musculoskeletal Problems in Construction

Secretariat

American Society of Safety Engineers
1800 East Oakton Street
Des Plaines, Illinois 60018-2187

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Foreword

(This Foreword is not a part of American National Standard A10.40-2007.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor, and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

A10.1 Planning for Construction Safety and Health (under development)
A10.2 Safety, Health, and Environmental Training (under development)
A10.3 Powder-Actuated Fastening Systems
A10.4 Personnel Hoists and Employee Elevators
A10.5 Material Hoists
A10.6 Demolition Operations
A10.7 Transportation, Storage, Handling, and Use of Commercial Explosives and Blasting Agents
A10.8 Scaffolding
A10.9 Concrete and Masonry Construction
A10.10 Temporary and Portable Space Heating Devices
A10.11 Personnel and Debris Nets
A10.12 Excavation
A10.13 Steel Erection
A10.15 Dredging
A10.16 Tunnels, Shafts, and Caissons
A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges
A10.19 Pile Installation and Extraction Operations (under development)
A10.20 Ceramic Tile, Terrazzo, and Marble Work
A10.22 Rope-Guided and Non-Guided Workers' Hoists
A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
A10.25 Sanitation in Construction (under development)
A10.26 Emergency Procedures for Construction Sites (under development)
A10.27 Hot Mix Asphalt Facilities
A10.28 Work Platforms Suspended from Cranes or Derricks
A10.29 Aerial Lifts in Construction (under development)
A10.31 Digger-Derricks
A10.32 Fall Protection Systems for Construction Industry Users
A10.33 Safety and Health Program Requirements for Multi-Employer Projects
A10.34 Public Protection
A10.36 Railroad Construction Safety (under development)
A10.37 Debris Nets
A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
A10.39 Construction Safety and Health Audit Program
A10.40 Reduction of Musculoskeletal Problems in Construction
A10.41 Equipment Operator and Supervisor Qualifications and Responsibilities (under development)
A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
A10.43 Confined Spaces in Construction (under development)
A10.44 Lockout/Tagout in Construction
A10.46 Hearing Loss Prevention
A10.47 Highway Construction Safety (under development)
A10.48 Communication Tower Erection (under development)

One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. (Although this standard was not intended to be and should not be used by governmental authorities in any enforcement procedures or as a basis for enforceable standards.) If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be changed to refer to the corresponding regulations.

Revisions: The A10 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant paragraph number(s), the proposed wording, and the reason for the proposal. Pertinent documentation would enable the A10 Committee to process the changes in a more timely manner.

Interpretations: Upon a request in writing to the Secretariat, the A10 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant paragraph number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

No one but the A10 Committee (through the A10 Secretariat) is authorized to provide any interpretation of this standard.

Approval: Neither the A10 Committee nor American National Standards Institute (ANSI) "approves," "certifies," "rates," or "endorses" any item, construction, proprietary device, or activity.

Appendices: Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

Committee Meetings: The A10 Committee meets twice a year. Persons wishing to attend a meeting should contact the Secretariat for information.

Standard Approval: This standard was processed and approved for submittal to ANSI by the American National Standards Committee on Safety in Construction and Demolition Operations, A10. Approval of the standard does not necessarily imply (nor is it required) that all Committee members voted for its approval. At the time this standard was approved, the A10 Committee had the following members:

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Contents

AMERICAN NATIONAL STANDARD A10.40
REDUCTION OF MUSCULOSKELETAL PROBLEMS IN CONSTRUCTION

1. SCOPE AND PURPOSE

1.1 Scope. This standard applies to construction work where there may be risk factors, which could lead to musculoskeletal problems for construction workers. This standard does not apply to office or administrative work performed by construction companies.

1.2 Purpose. The purpose of this standard is to reduce occupational contributions to musculoskeletal problems in construction workers.

Note: Implementing this standard can help reduce the risk of musculoskeletal problems, but may not eliminate them due to the complex etiology of musculoskeletal problems and non-occupational risk factors. Note also that the mere presence of occupational risk factors may not constitute a problem.

Note: This standard is not intended to be and should not be used by governmental authorities in any enforcement procedures or as a basis for enforceable standards. The committee understands that there is not complete agreement about the causes and solutions to musculoskeletal problems in construction.

1.3 Modifications and Exemptions. In cases of practical difficulty, infeasibility, new developments, and/or unnecessary hardship, exceptions may be made to the literal requirements of this standard, but only when it is clearly evident that equivalent protection is thereby assured.

2. DEFINITIONS

2.1 Musculoskeletal Problems. Musculoskeletal problems include injuries to the muscle, tendon, sheath, nerve, bursa, blood vessel, bone, joint, or ligament and musculoskeletal pain or swelling, and also where there may not be any obvious evidence of injury, and where occupational exposure is clearly identified. The injuries include, but are not limited to:

- Muscular
- Carpal Tunnel Syndrome
- Thoracic Outlet
- Tenosynovitis
- Myalgia
- Double Crush Syndrome
- Reynaud's
- DeQuervains
- Strains
- Cubital Tunnel Syndrome
- Connective Tissue
- Bursitis
- Spasms
- Sciatica
- Disc Damage
- Neurological
- Vascular
- Tendonitis
- Back

2.2 Occupational Risk Factors. Conditions or activities on a construction site that may increase the likelihood that a musculoskeletal problem may occur. The mere presence of these risk factors may not constitute a problem. The magnitude of the risk is related to the duration and magnitude of exposure and the combination of risk factors.

Note: Appendix G includes additional discussion to help understand these risk factors.

2.2.1 ***Force.*** Use of the muscles to move or hold objects – e.g., pushing, pulling lifting, lowering, and carrying.