

# American National Standard

*for Adaptive Sports Equipment –*  
**Volume 2:**  
**Adaptive Golf Cars**

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Rehabilitation Engineering and Assistive Technology Society of North America

This is a preview of "ANSI/RESNA ASE-2:201...". [Click here to purchase the full version from the ANSI store.](#)

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American National Standard  
for Adaptive Sports Equipment –

**Volume 2:  
Adaptive Golf Cars**

Secretary

**Rehabilitation Engineering and Assistive  
Technology Society of North America**

Approved 01 September 2012

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## Foreword

This standard covers the requirements and test methods for the testing of adaptive sports equipment (ASE). Volume 2 was developed to establish safety specifications for the design and operation of adaptive golf cars driven by electric motors with respect to speed, acceleration, stability, braking systems, operational controls, electrical systems, and general configurations. A specified safety warning label lists the major safety and precautionary operating measures to be observed. Safety codes and standards are intended to enhance public health and safety.

RESNA ASE Volume 2 consists of the following section under the general title Adaptive Sports Equipment:

### **Volume 2: Adaptive Golf Cars**

#### **Section 1: Adaptive Golf Cars Safety and Performance Specifications**

The following RESNA ASE Volume is also available:

### **Volume 1: Winter Sports Equipment**

This standard was prepared by the Standards Development Committee authorized and established by Mobility Golf, a non-profit corporation. Effective January 1, 2012, the sponsorship of the standard was transferred to RESNA. This standard applies to adaptive golf cars manufactured subsequent to its publication.

RESNA is accredited as a standards organization and the Assistive Technology Standards Board oversees the work of the RESNA standards committees. RESNA is an interdisciplinary organization that promotes assistive technology for people with disabilities.

Suggestions for the improvement of this standard are welcome. They should be sent to the following address:

**RESNA Assistive Technology Standards Board  
1700 North Moore Street, Suite 1540  
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This standard was approved by the RESNA Standards Committee on Adaptive Golf Cars and the RESNA Assistive Technology Standards Board for submittal to ANSI. Committee approval of the standard does not necessarily imply that all the committee members voted for its approval or the approval of every test method or requirement in the standard. At the time the standard was developed, the RESNA Standards Committee on Adaptive Golf Cars consisted of the following members:

<b>Organization Represented</b>	<b>Name of Representative</b>
Recreation Accessibility Consultants, LLC .....	Chair, John McGovern
GolfXpress .....	Vice Chair, Mitch Oliver
Mobility Golf .....	Secretary, Richard Thesing
Beneficial Designs, Inc.....	Peter Axelson
Chicago Park District .....	Larry Labiak
National Golf Course Owners Association.....	Mike Tinkey
PGA of America .....	Steve Jubb
SoloRider .....	Deryck Jernigan
Consumer .....	Martin Ebel, Esq.
Consumer .....	John Nicholas
Golf Instructor .....	Judy Alvarez, PGA, LPGA

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## Scope of Volume 2

**Volume 2: Adaptive Golf Cars** of the RESNA American National Standard for Adaptive Sports Equipment applies to adaptive golf cars.

This standard specifies requirements and test methods for determining adaptive golf car performance. It also specifies requirements for the disclosure of the test results.

These test methods may be used to verify manufacturers' claims that a product exceeds the minimum requirements of this standard.

**WARNING:** This RESNA Standard calls for the use of procedures that may be injurious to the testing technician if adequate precautions are not taken.

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## **Section 1**

# **Adaptive Golf Cars Safety and Performance Specifications**

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## Section 1 Introduction

Most of the language of this standard is derived from two other standards: ANSI/NGCMA Z130.1-2011, Safety and Performance Specifications for Golf Cars and parts of ISO 7176 Wheelchairs, an international series of standards for electric mobility devices. The Standards Development Committee was also given important technical input from Kristopher Seluga, a forensic engineer with Technology Associates.

If the ISO or NGCMA completes the development of a new standard, this RESNA standard shall supersede the ISO or NGCMA version.

# Section 1: Adaptive Golf Cars Safety and Performance Specifications

## 1 Scope and purpose

### 1.1 Scope

This section of RESNA ASE-2 specifies the safety and performance specifications relating to adaptive golf cars, driven by electric motors, specifically intended for and used on golf courses for transporting golfers and their equipment. This section does not apply to Personal Transport Vehicles, (PTVs), which are covered by ANSI/NEMA Z135. Adaptive golf cars are designed so that they can be used by golfers with and without a mobility impairment.

### 1.2 Purpose

The purpose of this section is to promote safety in the design, manufacture, maintenance and operation of adaptive golf cars. This section may be used as a guide by regulatory authorities desiring to formulate safety rules and regulations. This standard is also intended for voluntary use by others associated with manufacturing, maintaining or utilizing adaptive golf cars. This section is intended to apply to adaptive golf cars newly manufactured one year or more after the date of publication of this standard.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI/NEMA Z535, Product safety signs and labels (see clause 9.2.1)

NIST, Appendix B, "NIST Special Publication 811: Guide for the Use of the International System of Units (SI)". National Institute of Standards and Technology (see clause 4.3)<sup>1</sup>

NASA RP-1024 (N79-11734), Anthropometry Source Book, Volume 1: Anthropometry for designers<sup>2</sup> (see clause 9.6.1)

NGCMA Golf Course Safety Guidelines (see clause 5.2)

NGCMA Golf Car Storage Safety Guidelines<sup>3</sup> (see clauses 5.2 and 7.1)

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<sup>1</sup> Available from physics.nist.gov/cuu/pdf/sp811.pdf.

<sup>2</sup> Available from National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Or order via <http://www.ntis.gov/search/index.aspx> - Product Code N7911734.