ASME PASE-2024

(Revision of ASME PASE-2019)

Safety Standard for Portable Automotive Service Equipment

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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Two Park Avenue • New York, NY • 10016 USA

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FOREWORD

This ASME Standard, Safety Standard for Portable Automotive Service Equipment, has been developed under the procedures for ASME Codes and Standards development committees. This Standard had its beginning in June 197[illegible] when the Jack Institute addressed the B30 Committee on Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings. The Jack Institute requested the B30 Committee either to develop a standard for automotive jacks or to include this equipment as part of the revision of ASME B30.1, Jacks. The B30 Committee declined this request.

As a result, the Jack Institute petitioned the American National Standards Institute (ANSI) in July 1979 for the formation of a committee to promulgate safety and performance standards for portable automotive lifting devices, requesting the designation of ASME as sponsor of the project.

In September 1979, ASME's Policy Board, Codes and Standards, approved sponsorship of the committee to operate under the procedures developed by ASME and accredited by ANSI. A nominating committee was appointed to recommend a proposed membership to the ASME Safety Codes and Standards Committee for approval. The membership was approved at the beginning of May 1980.

The inaugural meeting of the ASME Committee on Portable Automotive Lifting Devices (PALD) was held in July 1980. The Committee determined that the format of this standard would be such that separate volumes, each complete as to design, marking, identification, testing, operation, inspection, and maintenance, would cover the different types of equipment included in the PALD scope. In the 1993 edition, the various volumes were combined into one standard with common requirements in one place and the information specific to a particular type of equipment set out in succeeding Parts. This allowed for greater consistency in requirements and eliminated redundancy.

In April 2007, the ASME Committee on PALD recognized the need to develop a standard for PALD-related equipment not covered under the ASME PALD standard. As a result, an ASME PALD subcommittee was appointed by members currently serving on the ASME PALD Committee to propose a new standard for these products. This subcommittee then drafted a basic scope and outline of this new standard and petitioned the ASME Council of Codes and Standards for permission to proceed with the development of this standard to cover equipment described in the charter of the ASME PALD Committee. The standard was approved by ANSI on February 3, 2010, as the Safety Standard for Automotive Service and Maintenance Products (ASP).

In July 2011, the PALD Committee approved changing the name and charter of the PALD Committee to the Portable Automotive Service Equipment (PASE) Committee to encompass both the ASME PALD and ASME ASP published standards. As a result of this change, the Committee decided to combine the two standards into this new Safety Standard for Portable Automotive Service Equipment. This Standard presents a coordinated set of rules that may serve as a guide to manufacturers, to government and other regulatory bodies, to municipal authorities, and to commercial users responsible for the inspection, maintenance, and instruction in the use of the equipment falling within its scope.

Safety codes and standards are intended to enhance public health and safety. Revisions result from Committee consideration of factors such as technological advances, new data, and changing environmental and industry needs. Revisions do not imply that previous editions were inadequate.

ASME PASE-2019 was approved by ANSI on March 25, 2019. ASME PASE-2024 was approved by ANSI on September 16, 2024.

ASME PASE COMMITTEE
PORTABLE AUTOMOTIVE SERVICE EQUIPMENT

(The following is the roster of the committee at the time of approval of this Standard.)

STANDARDS COMMITTEE OFFICERS

F. G. Heath, *Chair*
S. J. Rucker, *Vice Chair*
N. Gomez, *Secretary*

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J. Heath, *Contributing Member,* Tire Industry Association
B. Polgrean, *Contributing Member,* Harbor Freight
A. Scorgie, *Contributing Member,* Harbor Freight

CORRESPONDENCE WITH THE PASE COMMITTEE

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General. ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Standard should be sent to the staff secretary noted on the committee's web page, accessible at https://go.asme.org/PASEcommittee.

Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive email notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number, the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases. The committee does not issue cases for this Standard.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Inquiry Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers can track the status of their requests at https://go.asme.org/Interpretations.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Interpretations are published in the ASME Interpretations Database at https://go.asme.org/Interpretations as they are issued.

Committee Meetings. The PASE Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/PASEcommittee.

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PREFACE

GENERAL

This Standard is one of many safety standards on various subjects that have been formulated under the general auspices of The American Society of Mechanical Engineers (ASME). One purpose of the Standard is to serve as a guide to governmental authorities having jurisdiction over subjects within the scope of the Standard. It is expected, however, that the Standard will find a major application in industry, serving as a guide to manufacturers, suppliers, purchasers, and operators of the equipment. If adopted for governmental use, the references to other national standards in this Standard may be changed to refer to the corresponding regulations of the governmental authorities.

The use of portable automotive service equipment (PASE) is subject to certain hazards that cannot be precluded by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have personnel involved in the use and operation of equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Examples of hazards are dropping, tipping, or slipping of motor vehicles or their components caused primarily by improperly securing loads; overloading; off-centered loads; use on other than hard, level surfaces; and using equipment for a purpose for which it was not designed.

The PASE Committee fully realizes the importance of proper size, strength, and stability as safety factors in the design of this equipment. This equipment is used on various motor vehicles and their components under variable working conditions. These conditions have been considered to provide safety and flexibility in its use. The requirements given in this Standard must be interpreted accordingly and judgment should be used in determining their application.

MANDATORY AND ADVISORY RULES

Mandatory rules of this Standard are characterized by use of the word *shall.* If a provision is of an advisory nature, it is indicated by use of the word *should* and is a recommendation to be considered, the advisability of which depends on the facts in each situation.

SI (METRIC) CONVERSIONS

This Standard contains SI (metric) units as well as U.S. Customary units. The values stated in U.S. Customary units are to be regarded as the standard. The SI units in the text have been directly (soft) converted from the U.S. Customary units.

ASME PASE-2024
SUMMARY OF CHANGES

Following approval by the ASME PASE Standards Committee and ASME, and after public review, ASME PASE-2024 was approved by the American National Standards Institute on September 16, 2024.

ASME PASE-2024 includes the following changes identified by a margin note, **(24)**.

Page	*Location*	*Change*
ix	Correspondence With the PASE Committee	Added
x	Preface	Revised
1	1-4	Updated
3	2-1.2	Definition of *load-loss control* added
4	2-2.1	Revised
5	2-4.2	Last sentence revised
9	4-2.1.2	Second and third sentences revised
16	4-4.1	Subparagraph (b) revised
18	5-1.2	Subparagraph (a) revised
20	5-4.1	Revised
21	6-2.3	Third and fourth sentences added
28	6-3.1	Subparagraphs (a)(8), (a)(9), and (b)(8) added and subsequent subparagraphs redesignated
29	6-4.1.1	First sentence added
34	8-1.1	Revised
34	8-1.2	Revised
34	8-2	Revised in its entirety
38	8-3.1.1	(1) Subparagraph (c) revised (2) Subparagraph (e) added and subsequent subparagraphs redesignated
38	8-3.1.2	Subparagraphs (c), (d), (g), and (h) revised
38	8-3.1.3	Revised
38	8-3.2.1	Subparagraph (b) added and subsequent subparagraph redesignated
39	8-3.2.2	Revised
39	8-3.2.3	Subparagraph (b) added and subsequent subparagraph redesignated
39	8-4.1	Revised in its entirety
39	8-4.2	Revised in its entirety
47	11-2.1.3	Revised
47	11-2.1.4	Added
47	Table 11-2.1.4	Added

Page	*Location*	*Change*
47	11-3.1	Subparagraph (f) added and subsequent subparagraph redesignated
47	11-3.2	Subparagraph (a) revised
48	11-4.1.6	Revised
46	Figure 11-1.3-2	Title of illustration (b) revised
66	17-4.1.2	Cross-reference in first sentence revised
67	18-1.2	Revised
72	Figure 19-1.3-1	Terms “Boom” and “Support arm” revised to “Transverse beam” and “Secondary beam,” respectively

Part 1
Introduction

1-1 SCOPE

The scope of this Standard is the standardization of safety and performance requirements for portable automotive service equipment (PASE) including, but not limited to, the following:

(a) attachments, adapters, and accessories
(b) automotive hydraulic jacks
(c) automotive mechanical jacks
(d) automotive stands
(e) automotive ramps
(f) mobile vehicle lifts and jacks
(g) vehicle transport lifts
(h) vehicle-moving dollies
(i) component dollies and jacks
(j) shop cranes
(k) engine stands
(l) shop presses
(m) oil-filter crushers
(n) strut spring compressors
(o) oil and antifreeze handlers
(p) portable hydraulic power kits
(q) engine support tools

This Standard includes requirements for safety, health, design, production, construction, maintenance, performance, or operation of electrical, mechanical, hydraulic, or pneumatically powered equipment, and qualification of personnel. Safety and construction requirements for electrical equipment are included in UL 201 and UL 2089. As deemed necessary by the ASME PASE Committee, additional equipment classified as PASE-related can be added as the need arises, to ensure the safe operation of the equipment by the end user.

1-2 APPLICATION

This Standard applies to design, construction, marking, operation, maintenance, and owner or operator inspection of the portable automotive service equipment listed in section 1-1 used during service, maintenance, and storage of components, vehicles, or both. Operation and maintenance instructions in this Standard are intended for general application. The equipment manufacturer or supplier shall be consulted for specific operating and maintenance instructions. This Standard does not apply to similar lifting devices designed and manufactured for other commercial or industrial uses, such as those within the scope of ASME B30.1, ANSI/ALI ALCTV, ANSI/ALI ALIS, and ANSI/ALI ALOIM.

1-3 PURPOSE

This Standard is designed to

(a) guard against and mitigate injury, and otherwise provide for the protection of life, limb, and property by prescribing safety requirements

(b) provide direction to purchasers, owners, employers, supervisors, and others concerned with, or responsible for, its application

(c) guide governmental and other regulatory bodies in the development, promulgation, and enforcement of appropriate safety directives

1-4 REFERENCES (24)

The following is a list of standards and specifications referenced in this Standard:

ANSI/ALI ALCTV. Standard for Automotive Lifts — Safety Requirements for Construction, Testing, and Validation. Automotive Lift Institute.
ANSI/ALI ALIS. Standard for Automotive Lifts — Safety Requirements for Installation and Service. Automotive Lift Institute.
ANSI/ALI ALOIM. Standard for Automotive Lifts — Safety Requirements for Operation, Inspection, and Maintenance. Automotive Lift Institute.
ANSI/ISEA Z87.1. Occupational and Educational Personal Eye and Face Protection Devices. International Safety Equipment Association.
ANSI Z535.1. Safety Colors. National Electrical Manufacturers Association.
ANSI Z535.3. Criteria for Safety Symbols. National Electrical Manufacturers Association.
ANSI Z535.4. Product Safety Signs and Labels. National Electrical Manufacturers Association.
ANSI Z535.6. Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials. National Electrical Manufacturers Association.
ASME B30.1. Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries. The American Society of Mechanical Engineers.