



SURFACE VEHICLE STANDARD

J98™

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Personnel Protection for General Purpose Industrial Machines

RATIONALE

The technical report covers technology, products, or processes which are mature and not likely to change in the foreseeable future. Safety portions of this standard are covered by ISO 19296 and operator manual information is still used by industry.

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1. Scope and Purpose—This SAE Standard is intended to be used as a guide for manufacturers and users of general purpose industrial machines to provide a reasonable degree of protection for personnel during normal operation and servicing. This document excludes skid steers which are covered by SAE J1388. Avoidance of accidents also depends upon the care exercised by such persons (see SAE J153). Inclusion of this standard in state, federal, or any laws or regulations where flexibility of revision is lacking is discouraged.

2. References

2.1 Applicable Publications—The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J38 AUG91—Lift Arm Support Device for Loaders
SAE J99 MAR86—Lighting and Marking of Industrial Equipment on Highways
SAE J115 JAN87—Safety Signs
SAE J153 MAY87—Operator Precautions
SAE J185 JUN88—Access Systems for Off-Road Machines
SAE J208 AUG86—Safety for Agricultural Tractors
SAE J297 JUN85—Operator Controls on Industrial Equipment
SAE J386 JUN85—Operator Restraint Systems for Off-Road Work Machines
SAE J674 NOV90—Safety Glazing Materials — Motor Vehicles
SAE J717 FEB87—Auxiliary Power Take-Off Drives for Agricultural Tractors
SAE J721 MAY87—Operating Requirements for Tractors and Power Take-Off Driven Implements
SAE J725 MAR91—Mounting Brackets and Socket for Warning Lamp and Slow-Moving Vehicle (SMV) Identification Emblem
SAE J920 SEP85—Technical Publications for Off-Road Work Machines
SAE J943 JUN88—Slow-Moving Vehicle Identification Emblem
SAE J1026 APR90—Braking Performance—In Service Crawler Tractors and Crawler Loaders
SAE J1029 MAR86—Lighting and Marking of Construction and Industrial Machinery
SAE J1042 FEB86—Operator Protection for General Purpose Industrial Machines
SAE J1116 JUN86—Categories of Off-Road Self-Propelled Work Machines
SAE J1170 JUN91—Rear Power Take-Off for Agricultural Tractors

SAE J1362 JUN92—Symbols for Controls, Indicators, and Tell-Tales for Off-Road, Self-Propelled Work Machines

SAE J1388 JUN85—Personnel Protection—Skid Steer Loaders

SAE J1473 OCT90—Braking Performance—Rubber-Tired Earthmoving Machines

2.1.2 ANSI—AVAILABLE FROM ANSI, 25 WEST 43RD STREET, NEW YORK, NY 10036-8002

ANSI/SAE Z26.1—Safety Code for Safety Glazing Materials for Glazing, Motor Vehicles Operating on Land Highways

2.1.3 ASAE PUBLICATIONS—Available from ASAE, 2950 Niles Road, St. Joseph, MI 49085-9659.

ASAE S318.2—Safety Chain for Towed Equipment

ASAE S318.10—Safety for Agricultural Equipment

2.1.4 ECE PUBLICATION—Available from Economic Commission for Europe, Palais des Nations 1211 Geneve 10, Switzerland.

ECE Regulation #43—Uniform Provisions Concerning the Approval of Safety Glazing and Glazing Materials for Installation on Power Driven Vehicles and Their Trailers

2.1.5 ISO PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO 6405-2—Common symbols

3. **Definitions**

3.1 General Purpose Industrial Machines—Are defined as that class of tractors and associated equipment used in the operations such as landscaping, construction services, loading, digging, grounds keeping, and highway maintenance (see SAE J1116).

3.2 Propelling Machines—Are tractors or self-propelled units.

3.3 Towed, Semi-mounted, And Mounted Equipment—Are equipment used in conjunction with propelling machines as defined in 3.2.

3.4 A Highway—Is the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel. (Uniform Vehicle Code published by National Committee on Uniform Traffic Laws and Ordinances.)

3.5 Acute Entry Angle—Is the mesh point of gears or the run-on point where a belt or chain contacts a sheave, sprocket, or idler.

3.6 A "Guard" Or "Shield"—Is a barrier which is intended to prevent inadvertent contact with a potential hazard during operation.

3.7 Guarded By Location—A hazard is guarded by location when it is guarded by other parts or components of the machine that are not themselves guards, or when the hazard is beyond the safety distance.