

TECHNICAL PUBLICATIONS FOR OFF-ROAD WORK MACHINES

Compares to ISO 6750

Foreword—This Document has also changed to comply with the new SAE Technical Standards Board format.

1. Scope—This Recommended Practice applies to technical publications which present instructions for the proper unloading, set-up, installations, pre-delivery inspection, operation, and servicing of self-propelled work machines (Categories 1, 2, 3, 4, and 5 of SAE J1116 JUL85). Advertising and pre-purchase publications are not included.

1.1 Purpose

1.1.1 This Recommended Practice is to assist in the development of Technical Publications which will stress injury prevention and uniformity of format and content.

1.1.1.1 This Recommended Practice is intended to be a guideline for technical publications based upon current knowledge, the state-of-the-art, and prevailing requirements.

1.1.1.2 ISO 3600—"Operator Manuals and Technical Publication" was used as a reference source for this document.

2. References

2.1 Applicable Publications—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

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

SAE J115—Safety Signs

SAE J153—Safety Considerations for the Operator

SAE J208—Safety for Agricultural Equipment

SAE J284—Safety Alert Symbol for Agricultural, Construction & Industrial Equipment

SAE J297—Operator Controls on Industrial Equipment

SAE J298—Universal Symbols for Operator Controls on Industrial Equipment

SAE J389—Universal Symbols for Operator Controls on Agricultural Equipment

SAE J841—Operator Controls on Agricultural Equipment

SAE J1116 (JUL85)—Categories of Off-Road Self-Propelled Work Machines

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SAE J920 Revised SEP85

SAE J1150—Terminology for Agricultural Equipment

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

ISO 3600—Operator Manuals and Technical Publication

3. **Definitions**

3.1 Introduction—The instructions defined below may be published under one cover, separately, or in any combination desired. The selection and grouping of instructions may be directed by the type of equipment involved.

3.2 Pre-Delivery Set-Up and/or Installation Instructions—Outline in detail the procedures for properly preparing and/or installing new equipment for delivery to the customer.

3.3 Operation Instructions—Explain the procedures for proper operation of the equipment.

3.4 Maintenance Instructions—Explain the maintenance required and the methods of performing maintenance on the equipment, including recommendation for lubricants, fuels, and other fluids as appropriate.

3.5 Repair/Overhaul Instructions—Provide detailed procedures for properly diagnosing, repairing, or overhauling the equipment.

3.6 Installation and/or Modification Instructions—Describe in detail the procedures for installing components or attachments and/or performing inspections or modifications on equipment.

3.7 Parts Information—Lists and identifies all replaceable parts needed to service the product including safety signs and any optional equipment.

3.8 Other Instructions—Publications required to supplement instructions listed in paragraphs 3.2–3.8.

4. **Publication Specifications**

4.1 Publication Identification—Each publication should identify the manufacturer's or distributor's name, the model designation of the machine, the name or type of publication, the part number or publication number by which it may be ordered, and the printing or publication date.

4.2 Elements—Where applicable, each publication should contain a foreword or introduction, a description and illustration of the machine, a table of contents listing major areas of the machine, a safety section, subject material, and an index for identifying individual components of the machine. (Refer to Section 6 for details.)

4.2.1 Each publication should contain a statement advising where to get assistance if items covered in the publication are not understood.

4.3 Page Layout—Illustrations and/or appropriate injury prevention messages should be on the same page or adjacent pages as the related text and can be at other appropriate locations.

4.4 Media and Formats—Any publication may be issued in printed form and/or microfiche.

4.4.1 The preferred size of printed publications is 210 x 297 mm (metric), or 8-1/2 x 11 in (U.S. Customary). Other sizes may be considered if more suitable.

4.4.2 The preferred microfiche size is 105 x 148 mm (4.1 x 5.8 in).

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- 4.4.3 The preferred microfiche reduction factor is 42X.
- 4.4.4 Each microfiche should have a header (title stripe). (Refer to 4.1.)
- 4.4.5 Microfiche should be suitable for magnification on commercially available equipment.
- 4.4.6 Microfiche images should read from left to right and from top down. "A" row should be at the top. Images should be "right heading" with the header (title stripe).
- 4.5 **Legibility**—All information shall be presented in such a way that it can be easily read and understood and where applicable contain illustrations to supplement the written information.
- 4.6 **Durability**—The medium shall have reasonable durability when exposed to conditions of rain, dampness, or grease during its intended use.
- 4.7 **Shipment**—Packing containers shall be provided which will reasonably protect the publication during shipment.
- 4.8 **Emerging Technology**—Nothing in this practice shall limit or restrict the use of developing technology for the publication, display, and/or communication of technical information.

5. **Safety Content**

5.1 **All Publications**

- 5.1.1 **SAFETY ALERT SYMBOL**—This symbol shall be displayed and defined as in SAE J284, and its use in the publication explained to the reader. This information shall precede the injury prevention messages in this section as defined under 5.1.2.
- 5.1.2 **SAFETY SECTION**—This section shall precede the primary text or other functional information in all applicable publications. This section shall contain hazard related information and injury prevention messages of a general nature. (Ref.: SAE J153; SAE J208.)
- 5.1.3 **SPECIFIC INJURY PREVENTION MESSAGES**—Messages that are specific to particular hazards shall appear in appropriate sections of the text, and may also be displayed in the safety section. These messages shall precede functional instructions to which they apply. (Ref.: SAE J115, paragraph 3.3.2.)
- 5.1.4 **SIGNAL WORDS**—Each injury prevention message shall be accompanied by the Safety Alert Symbol and one of the signal words "CAUTION," "WARNING," or "DANGER." When repeating the message from a "CAUTION," "WARNING," or "DANGER" safety sign on the machine, the same signal word used on the safety sign shall appear with the injury prevention message in the applicable publication (Ref.: SAE J208; SAE J115.)
- 5.1.5 **SAFETY SIGNS**—Safety signs that appear on the equipment shall be reproduced in legible size in all applicable publications in this appropriate section of the text relative to the point of use and in the safety section, and/or in a separate safety sign section. The signs may be reproduced in black and white even if they appear in color on the machine. (Ref.: SAE J208; SAE J115.)

All applicable publications shall also include with reference to safety signs:

- 5.1.5.1 Instructions and procedures for keeping the signs legible.
- 5.1.5.2 Instructions that the signs must be replaced if they are missing or illegible.

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- 5.1.5.3 Instructions that current signs specified by the manufacturer shall be affixed to new equipment components installed during repair.
- 5.1.5.4 Information on how to obtain a replacement sign(s).
- 5.1.5.5 Instructions on how to affix the sign(s).
- 5.1.5.6 Information on the location of each sign on the equipment.

References:

SAE J284—Safety Alert Symbol for Agricultural, Construction and Industrial Equipment.
SAE J153—Safety Considerations for the Operator.
SAE J115—Safety Signs.
SAE J208—Safety for Agricultural Equipment, paragraph 13.4.1.

6. Content Of Publications

6.1 Pre-delivery, Set-up and/or Installation Instructions—These shall meet all applicable specifications as defined in Sections 4 and 5. In addition, they may include any or all of the following specific information:

- 6.1.1 General description of the equipment/machinery.
- 6.1.2 Shipping information.
- 6.1.3 Unloading instructions.
- 6.1.4 Assembly and/or installation instructions.
- 6.1.5 Pre-delivery and delivery service check list.
- 6.1.6 Start-up and operation instructions.

6.2 Operating Instructions—These shall meet all applicable specifications as defined in Sections 4 and 5. In addition, they may include any or all of the following specific information:

- 6.2.1 General specifications and description of the equipment/machinery.
- 6.2.2 Operator responsibility. (May be defined, as appropriate.)

References:

SAE J153; SAE J208.

- 6.2.3 Identification of indicators and controls.

References:

SAE J297; SAE J841.

- 6.2.3.1 Illustrations identifying indicators and controls relative to the operator's positions.
- 6.2.3.2 Separate detailed illustrations and explanation if purpose, function, and/or usage is not readily evident.

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6.2.3.3 Illustrations and explanations of all symbols used on the equipment/machinery.

References:

SAE J389; SAE J298.

6.2.4 Instructions for proper operation of the equipment/machinery, including:

6.2.4.1 Pre-starting instructions.

6.2.4.2 Starting, stopping, shutdown instructions, and emergency procedures, if applicable.

6.2.4.3 Operation instructions, specifications, and adjustments.

6.2.5 Operations troubleshooting information.

6.2.6 Description of accessories and/or optional equipment.

6.2.7 Transporting instructions.

6.2.8 Storage instructions.

6.3 Maintenance Instructions (for Operators)—These shall meet all applicable specifications as defined in Sections 4 and 5. In addition, they may include any or all of the following specific information:

6.3.1 Recommended fuels, lubricants, fluids, and other maintenance materials.

6.3.2 Refill capacities.

6.3.3 Maintenance intervals.

6.3.4 Maintenance chart(s).

6.3.5 Detailed maintenance procedures.

6.4 Repair/Overhaul Instructions—These shall meet all applicable specifications as defined in Sections 4 and 5. In addition, they may include the following specific information:

6.4.1 General description and specifications of the equipment/machinery.

6.4.2 Sectionalized, illustrated diagnostic, and repair instructions by major assemblies and systems, including:

6.4.2.1 Detailed table of contents.

6.4.2.2 Theory of operation - charts and diagrams.

6.4.2.3 Diagnostic procedures.

6.4.2.4 Detailed segmental disassembly and assembly procedures including weights of major components, or specify handling equipment where appropriate, to assure proper handling.

6.4.2.5 Repair specifications such as allowable wear limits of parts, tolerances, torque values, adjustments, etc.

6.4.2.6 Information on special tools and fixtures.