



SURFACE VEHICLE INFORMATION REPORT

J2592™**NOV2025**

Issued 2006-06
Revised 2019-01
Reaffirmed 2025-11

Superseding J2592 JAN2019

(R) Carbon Steel Tubing for General Use
Understanding Nondestructive Testing for Carbon Steel Tubing

RATIONALE

This SAE standard has been revised as part of a Five-Year Review. Document changes include the addition of a forward and a table of contents. Revised sections include the scope, related publications list, and additional process details for individual types of testing. Verbiage has been updated throughout the standard to align the document with other recently revised tube standards.

SAE J2592 has been reaffirmed to comply with the SAE Five-Year Review policy.

FORWARD

This SAE Information Report describes various nondestructive testing methods for evaluating the integrity of SAE steel tube materials. The nondestructive testing methods described in this document are currently used to inspect steel tubing manufactured to the SAE tubing standards listed in the related publications. These SAE standard tube materials are intended for industrial ground vehicles, stationary industrial equipment, and automotive applications.

This information report is written to provide a basic understanding of the various nondestructive testing methods included in the document, even though the user might not have specific knowledge of steel tube mill activities and manufacturing processes. The test descriptions found in this information report will provide clarity for the user when compared with test certificates issued by steel tube producers.

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SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

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1. SCOPE

This Information Report describes eddy current testing, flux leakage testing, ultrasonic testing, and magnetic particle testing of steel tubing. The purpose of these testing methods is to expose flaws in the tube material or weld zone, such as discontinuities, seams, cracks, holes, voids, and other imperfections characteristic to the specific construction of the tubing. When agreed upon between the producer and purchaser, nondestructive testing is used in lieu of destructive hydrostatic pressure proof testing.

Aircraft and Aerospace applications were not considered during the preparation of this document.

2. REFERENCES

2.1 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J356	Welded Flash-Controlled Low-Carbon Steel Tubing Normalized for Bending, Double Flaring, and Beading
SAE J358	Nondestructive Tests
SAE J420	Magnetic Particle Inspection
SAE J425	Electromagnetic Testing by Eddy Current Methods
SAE J428	Ultrasonic Inspection
SAE J524	Seamless Low-Carbon Steel Tubing Annealed for Bending and Flaring
SAE J525	Welded and Cold Drawn Low-Carbon Steel Tubing Annealed for Bending and Flaring
SAE J526	Welded Low-Carbon Steel Tubing Suitable for Bending, Flaring, Beading, Forming, and Brazing
SAE J527	Brazed Double Wall Low-Carbon Steel Tubing
SAE J1677	Tests and Procedures for Carbon Steel and High-Strength Low-Alloy Steel Tubing
SAE J2435	Welded Flash Controlled, SAE 1021 Carbon Steel Tubing, Normalized for Cold Forming, Welding, and Brazing
SAE J2467	Welded and Cold-Drawn, SAE 1021 Carbon Steel Tubing, Normalized for Bending and Flaring
SAE J2551-1	Recommended Practices for Fluid Conductor Carbon, Alloy, and High-Strength, Low-Alloy Steel Tubing Applications - Part 1: Design and Fabrication
SAE J2551-2	Recommended Practices for Fluid Conductor Carbon, Alloy, and High-Strength, Low-Alloy Steel Tubing Applications - Part 2: General Specifications and Performance Requirements
SAE J2551-3	Recommended Practice for Fluid Conductor Carbon, Alloy, and High-Strength, Low-Alloy Steel Tubing Applications - Part 3: Procurement