SURFACE VEHICLE STANDARD

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Superseding J1942 MAR2019

Hose and Hose Assemblies for Marine Applications

RATIONALE

Updated 5.b. to promote usage of the new appendices, and 5.c. to reflect the current notification protocol to the U.S. Coast Guard. Updated testing frequency from 3 to 5 years and record retention requirement from 6 to 10 years in Section 10. Appendices A and B were added to promote consistent listing applications.

SAE J1942 has been reaffirmed to comply with the SAE Five-Year Review policy.

A reaffirmed status is given to technical reports that have been reviewed by the technical committee and deemed to be current with no need for immediate revision. No changes have been made to this document as a result of this review.

1. SCOPE

SAE J1942, developed through the cooperative efforts of the U.S. Coast Guard and SAE, became effective August 28, 1991[1], as the official document for nonmetallic flexible hose assemblies for commercial marine use.

This SAE Standard covers specific requirements for several styles of hose and/or hose assemblies in systems aboard commercial vessels inspected and certificated by the U.S. Coast Guard. It is intended that this document establish hose constructions and performance levels that are essential to safe operations in the marine environment. Refer to SAE J1273 for selection, installation, and maintenance of hose and hose assemblies.

Refer to SAE J1527 for hose to convey gasoline or diesel fuel aboard small craft, including pleasure craft and related small commercial craft regulated directly or by reference under 33 CFR 183 Subpart J, and boats and yachts meeting American Boat and Yacht Council standards.

SAE J1942-1 is a listing of the products which have been certified for use in the applications described in SAE J1942, Table 1, for fluid power, fuel oil, lube oil, water, and pneumatic systems.

SAE J1942-1 is updated yearly and is available from SAE as a single copy document.

[1] Refer to Federal Register/Vol. 56, No. 145/Monday, July 29, 1991/Rules and Regulations

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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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2. REFERENCES

2.1 Applicable Documents

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 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 J343	Test and Test Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies
SAE J517	Hydraulic Hose
SAE J1273	Recommended Practices for Hydraulic Hose Assemblies
SAE J1475	Hydraulic Hose Fitting for Marine Applications
SAE J1527	Marine Fuel Hoses
SAE J1942-1	Qualified Hoses for Marine Applications

2.1.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM D1141-98	Specification for Substitute Ocean Water

2.1.3 MSHA Publications

Available from MSHA, 1100 Wilson Boulevard, 21st Floor, Arlington, VA 22209-3939, Tel: 202-693-9400, www.msha.gov.

MSHA 30 CFR 18.65	Conservation of Power and Water Resources - Subchapter B - Regulations Under the Federal Power Act

2.1.4 ISO Publications

Copies of these documents are available online at http://webstore.ansi.org/.

ISO 15541	Ships and Marine Technology - Fire Resistance of Hose Assemblies - Requirements for the Test Bench

Documents
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Full document details: SAE J1942-2026 Hose and Hose Assemblies for Marine Applications

3. HOSE APPLICATION/CONSTRUCTION

Hose construction and performance shall conform to Table 1.

Table 1 - Hose application/construction

Code	Application	Maximum Working Pressure	Hose Reinforcement/ Construction	Requirements	Notes
HF	All Services	(1)(2)	Plies or braids of steel wire with or without textile(3)	Sections 6, 7, 8, 9, 10, 11 (SAE J517 may be substituted for Section 9)	Acceptable for Codes H, VW, NVW, and F applications(2)
H	Fluid Power (Hydraulic Systems)	(1)	Plies or braids of steel wire or textile(3)	Sections 6, 7, 9, 10, 11 (SAE J517 may be substituted for Section 9)	Acceptable for Codes H, VW, and NVW applications
F	Lube Oil and Fuel Systems	(1)	Plies or braids of steel wire with or without textile(3)	Sections 6, 7, 8, 9 (impulse per 9E not required), 10, 11	Acceptable for Codes F, VW, and NVW applications
VW	Vital and Nonvital Fresh and Salt Water	(1)	Plies or braids of steel wire or textile(3)	Sections 6, 7, 10, 11	Acceptable for Codes VW and NVW applications
NVW	Nonvital Water and Pneumatic	0.34 MPa	Optional	Sections 6, 7, 10, 11	Acceptable for Code NVW application only

(1) As rated by SAE J517 or as rated by manufacturer.
(2) Maximum working pressure for lube oil and fuel systems applications (Code F) may be less than maximum working pressure for other systems applications, e.g., Code H. Refer to manufacturer's catalog and Hose Assemblies List, SAE J1942-1.
(3) Wire helix construction may be used on suction and return lines in conjunction with a textile reinforcement.

4. FITTINGS

Fittings shall conform to SAE J1475 where applicable. Only hose and fitting combinations that have been tested and passed the requirements of this document as hose assemblies are acceptable. Push-on fittings, quick disconnect couplings and fittings with a single worm-gear clamp, or a single band around the hose are unacceptable.

5. QUALIFICATION TESTS

For qualification to this document, hose and/or assemblies shall conform to the tests and requirements specified in Table 1 for each hose application.

Testing shall conform to SAE J343 except as noted.

Manufacturers wishing to have their hose assemblies listed in SAE J1942-1 shall:

a. Successfully test their hose to the requirements of Table 1.

b. Submit a letter of certification to the SAE J1942 test requirements for each specific type of hose tested. All sizes should be included in the same letter, which must also include all of the information necessary to make a SAE J1942-1 listing. The appropriate appendix shall be included with the submittal letter. Complete Appendix A for SAE J1942 submittals. Complete Appendix B for SAE J517 submittals.

Documents
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Full document details: SAE J1942-2026 Hose and Hose Assemblies for Marine Applications