

MIL-R-8573A
AMENDMENT 7
18 November 1983
SUPERSEDING
MIL-R-8573A
AMENDMENT 6
30 May 1980

MILITARY SPECIFICATION

RESERVOIRS, AIR, NONSHATTERABLE STEEL

This amendment forms a part of Military Specification MIL-R-8573A(ASG), dated 31 July 1957, and is approved for use by all Departments and Agencies of the Department of Defense.

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- 2.1, line 6: Delete reference to TT-P-664.
- 2.1, line 6: Add "TT-C-490 Cleaning Methods and Pretreatment of Ferrous Surfaces for Organic Coatings."
- 2.1, line 7: Add "MIL-P-116 Preservation-Packaging Method of."
- 2.1, line 7: Add "MIL-I-6866 Inspection, Penetrant Method of."
- 2.1, line 8: Delete reference to MIL-C-490.
- 2.1, line 12: Delete title of MIL-C-5501 and substitute: "Caps and Plugs, Protective, Dust and Moisture Seal."
- 2.1, line 16: Delete reference to MIL-S-7742.
- 2.1, line 17: Delete reference to MIL-E-7729.
- 2.1, line 19: Add "MIL-C-22750 Coating, Epoxy-Polyamide."
- * 2.1, line 19: Add "MIL-C-22751 Coating System, Epoxy-Polyamide, Chemical and Solvent Resistant: Process for Application of."
- 2.1, line 19: Add "MIL-C-23377 Primer Coating, Epoxy-Polyamide, Chemical and Solvent Resistant."
- 2.1, line 19: Add "MIL-C-81773 Coatings Polyurethane, Aliphatic Weather-Resistant."
- 2.1, line 19: Delete reference to MIL-C-81773 and substitute "MIL-C-83286 Coating Urethane, Aliphatic, Isocyanate for Aerospace Applications."
- 2.1, line 19: Add "MIL-C-81907 Coating System, Polyurethane, Aliphatic, Weather Resistant: Process for Application of."

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2.1, line 20: Add "Federal Standard 595 Colors."

2.1, line 23: Add "MIL-STD-143 Standards and Specifications, Order of Precedence for the Selection of."

2.1, line 23: Add "MIL-STD-794 Parts and Equipment, Procedures for Packaging of."

2.1, line 27: Delete "250-692-2" and substitute "0900-003-9000."

2.1, line 30: Delete reference to ANA Bulletin No. 143.

3.3.1, line 4: Delete "ANA Bulletin No. 143," and substitute "MIL-STD-143."

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3.4.2, line 2: Delete "20 percent," and substitute: ".20-percent."

*3.5.1 Delete in its entirety and substitute:

"3.5.1 Interior finish. The interior surface of reservoirs of all types of steel other than corrosion-resistant steel shall be finished with either procedure 1 or 2 as follows:

<u>Procedure</u>	<u>Prior Treatment</u>	<u>Primer</u>	<u>Top Coat</u>	<u>Application and Inspection</u>
1	TT-C-490 (Type I)	MIL-P-23377	MIL-C-22750	MIL-C-22751
2	TT-C-490 (Type I)	MIL-P-23377	MIL-C-83286	MIL-C-81907

The top coat shall consist of a minimum of two coats and shall be clear (unpigmented). The viscosity and number of coats and draining interval shall be adjusted to produce a coating thickness of 0.0026 inch minimum. No runs, puddles or bubbles shall be allowed.

3.5.2, Delete in its entirety and substitute:

"3.5.2 External finish. The external finish of reservoirs of all types of steel other than corrosion-resistant steel shall be finished with either procedure 1 or 2 as specified in 3.5.1, except that the top coat shall be black per FED-STD-595, color number 17038."

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4. Add the following paragraph:

"4.01 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements."

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4.2.3, Change paragraph number to "4.2.2."

4.3.1(b), Delete "radiographic inspection of welds," and substitute "Inspection of welds."

4.3.2, line 1: Delete "Three," and substitute "Two."

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Table III, Delete and substitute:

"Table III. Sampling tests.

Tests		Number of reservoirs
Permanent volumetric expansion	(4.4.4)	1
Normal temperature leakage	(4.4.5.1)	
Hydrostatic burst	(4.4.10)	
Macrostructure	(4.4.8)	
Permanent volumetric expansion	(4.4.4)	1
Gunfire	(4.4.11)	
Physical 1/	(4.4.6)	
Internal finish 1/	(4.4.7)	

1/ The local effects of gunfire or the resulting shock may affect the results of these tests. If satisfactory results are not secured, an additional cylinder may be tested."

4.4.3 Delete first sentence and substitute:

"The air reservoir shall be subjected to 4,500 hydrostatic cycles varying from 0 psig to rated charging pressure for this type, followed by 500 hydrostatic pressure cycles varying from 25 percent rated charging pressure to maximum flight pressure corresponding to the type as defined in 1.2. The above schedule shall be repeated 20 times for a total of 100,000 hydrostatic cycles."

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4.4.5.1, line 4: Delete "(4.2.3)," and substitute "(4.2.2)."

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4.4.9, Delete in its entirety and substitute:

"4.4.9 Inspection of welds."

"4.4.9.1 Radiographic inspection. After heat treatment, all welded joints which are to be subjected to internal pressure must be subjected to radiographic inspection. Defects indicated shall not exceed Group I of NAVSHIPS Standards 0900-003-9000. Elongated slag inclusions as mentioned in paragraph 3 of NAVSHIPS Standard 0900-003-9000 shall, for the purposes of this specification, be defined as slag inclusions greater in length than one-third the metal thickness, or longer than 1/16 inch (whichever is smaller), or any slag inclusion having a sharp tail."

"4.4.9.2 Surface inspection. All welds made of magnetizable materials shall be subjected to magnetic particle inspection in accordance with MIL-I-6868. All welds made of nonmagnetizable material shall be subjected to inspection by the penetrant method in accordance with MIL-I-6866."

4.4.11, Delete "(c)" in its entirety and substitute:

"(c) Ammunition: For reservoirs with a diameter of three inches or less, the ammunition shall be .30 calibre M-2 armor piercing, with a muzzle velocity of 2,800 \pm 100 feet per second (fps). For all others, the ammunition shall be .50 calibre M-2 armor piercing, with a muzzle velocity of 2,800 \pm 100 fps."

4.4.11, Delete "(e)" in its entirety and substitute:

"(e) Position: The reservoirs to be gunfired shall be mounted with the longitudinal axis of the reservoir 45 degrees from normal away from the gun position. The projectile shall be tumbled and shall not be considered tumbled unless the .30 calibre projectile produces and "in" hole at least 1/4-inch wide by 5/8-inch long, and the .50 calibre projectile produces an "in" hole at least 1/2-inch wide by 1-1/2-inches long."

4.4.11, Add the following subparagraph:

"(f) Velocity of projectile after tumbling: The projectile velocity shall be monitored during the last ten (10) feet prior to impact. The projectile shall have a minimum velocity of 2300 fps."

4.4.11.2, Second line: Delete "4.4.12.4" and substitute "4.4.11."

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4.4.11.3, Delete in its entirety and substitute:

"Gunfire requirements. The air reservoirs, when struck by gunfire as specified above, shall remain in one piece and the greatest dimension of the entry hole (cut and tear) created by the projectile shall not exceed the dimensions of the hole (cut) created by the projectile by more than three (3) inches in any direction. "Cutting" shall be considered as the actual section of the reservoir cut by contact with the projectile and "tear" shall be considered as an extension beyond the cut. The exit hole (cut and tear) shall be such that the cylinder will remain in one piece, provided there is no fragmentation. Reservoirs of less than two (2) inches in diameter, cut in two by a tumbled projectile, shall not be considered as having failed the test because of separation, provided there is no fragmentation."

4.5 Add the following paragraph:

"4.5 Packaging, packing and marking. Preparation for delivery shall be examined for conformance to section 5."

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5.1, Delete in its entirety and substitute:

"5.1, Preservation and packaging. Preservation and packaging shall be in accordance with MIL-P-116, Method III, except that the outlet threads shall be coated with grease conforming to MIL-L-4343 and the outlet shall be provided with a metallic shipping plug conforming to MIL-C-5501."

5.2, Delete in its entirety and substitute:

"5.2 Packing. Packing shall be in accordance with MIL-STD-794, level A, B, or C as specified by the procuring activity."

6.2(c), Delete in its entirety and substitute:

"(c) Level of packing required (see 5.2)."

*5.4 Add the following paragraph:

"5.4 Depressurization. The reservoir shall be depressurized prior to shipment from the manufacturer or overhaul facility."

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Table IV: Under column titled "Temperature °F", ninth line, delete "+350" and substitute "+250."

Delete "NOTICE" paragraph.

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NOTE: The margins of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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Preparing activity:
Navy - AS
Project No. 1650-0383