



## Standard Specification for Tanks, 5 and 10-Gal (20 and 40-L) Lube Oil Dispensing<sup>1</sup>

This standard is issued under the fixed designation F 670; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

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<sup>ε1</sup> ~~NOTE – Section 9 was added editorially in December 1994.~~

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### 1. Scope

1.1 This specification covers the material, dimensions, and construction of 5 and 10-gal (20 and 40-L) tanks purchased to store and dispense lubricating oils. The tanks are industrial safety cans mounted on a T-bar bracket, complete with drip tray. ~~Fig. 1. They~~

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<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F-25 on ~~Shipbuilding Ships and Marine Technology~~ and is the direct responsibility of Subcommittee F25.03 on Outfitting.

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~~meet or exceed current marine safety regulations.<sup>2</sup>~~

~~1.2 This equipment design has been shock tested in accordance with MIL-S-901 as follows:~~

~~1.2.1 Grade B,~~

~~1.2.2 Light weight,~~

~~1.2.3 Mounting fixture (4A),~~

~~1.2.4 Class I, and~~

~~1.2.5 Test Report No. (Letter N-2027/9936 SER 200-4622, dated Sept. 24, 1985<sup>3</sup>).~~

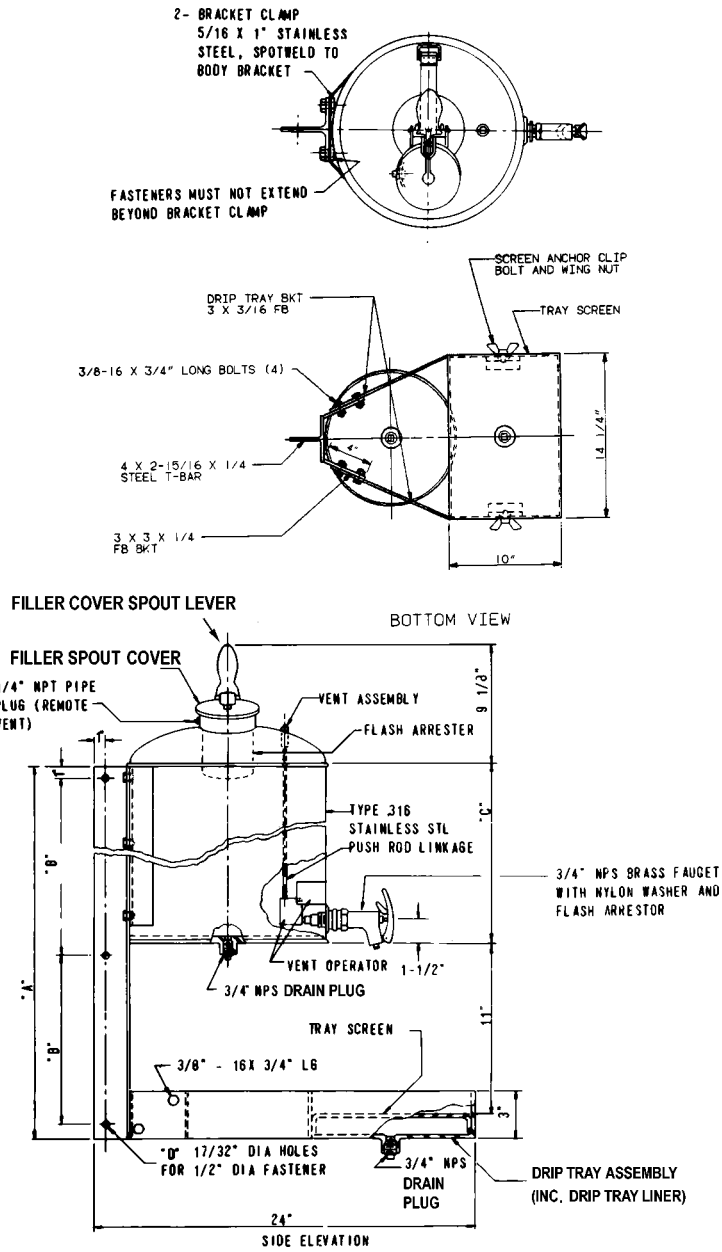
~~1.3 The~~

~~1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.~~

~~1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*~~

## **2. Referenced Documents**

2.1 *ASTM Standards:*



Size	A Height, in.	B Bolt Hole Spacing, in.	C Tank Height, in.	D Number of Bolt Holes	Weight, lb	
					Dry	Wet (Water)
5-gal	22 1/2	10 1/2	9 7/8	3	39	81
10-gal	33 3/4	10 1/2	20 7/8	4	49	132

Note 1—Dimensions and construction for guidance only.  
 Note 2—1 in. = 25.4 mm.  
 Note 3—1 lb = 0.4536 Kg.

FIG. 1 Dimension of Tank

- A 36/A36M Specification for Carbon Structural Steel<sup>2</sup>
- A 108 Specification for Steel Bars, Carbon, Cold Finished, Standard Quality<sup>3</sup>
- A 164 Specification for Electrodeposited Coatings of Zinc on Steel<sup>4</sup>
- A 167 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip<sup>5</sup>
- A 308 Specification for Steel Sheet, Cold-Rolled, ~~Long~~ Terne (Lead-Tin Alloy) Coated by the Hot-Dip Process<sup>6</sup>
- A 569/A569M Specification for Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled Sheet and Strip Commercial Quality
- ~~2.2 Military Standard:~~
- ~~MIL-S-901 Requirements for Shock Test, High-Impact, Shipboard Machinery, Equipment and Systems<sup>7,8</sup>~~

### 3. Ordering Information

3.1 Orders for tanks under this specification shall include the following:

- 3.1.1 Quantity (number),
- 3.1.2 Size, either 5 or 10 gal (20 or 40 L),
- 3.1.3 Purchase option for finished tank materials: Terne plate (4.1.23), and
- 3.1.4 ASTM designation and year of issue.

3.2 If only size, quantity, and ASTM designation are specified and no purchase options are specified, then suppliers shall furnish all stainless steel tanks, brass faucets with flame flash arrestors, and painted steel mounting columns with bolt-on drip tray assemblies, which include perforated steel tray liners, drain plugs, drilled mounting holes, and mounting bolts.

#### 3.3 Optional packaging/shipping.

3.3.1 If required for shipping, tanks shall be packaged individually in cartons suitable for freight handling.

### 4. Materials and Manufacture

#### 4.1 Materials:

4.1.1 *316 Stainless Steel Sheet* (Specification A 167), minimum thickness 24 gage (0.6 mm) on tank body, 22 gage (0.8 mm) on tank top and bottom; body bracket, filler spout, flash arrestor, vacuum breaker valve and linkage.

4.1.2 *316 Stainless Steel* ~~(material)~~ *Cast, Cast, Wrought, or Forged Flanges, (for faucet and drain).*

4.1.3 *Terne Plate Sheet* (purchase option), minimum thickness 22 gage (0.8 mm) on tank body, top and bottom: body bracket, filler spout (Specification A 308).

#### 4.1.4 Mild Steel:

4.1.4.1 *Bolt-On Column Stand*, T-section, hot-rolled (Specification A 36/A 36M); minimum thickness 0.160 in. (4 mm).

4.1.4.2 *Drip Tray Bracket*, round edge, hot-rolled (Specification A 569/A569M).

4.1.4.3 *Drip Tray Assembly*, hot or cold-rolled (Specification A 108).

4.1.4.4 *Drip Tray Liner*, 11-gage (3 mm), zinc-plated (Specification A 164).

4.1.4.5 *Filler Spout Cover*, zinc-plated steel (Specification A 164).

4.1.4.6 *Drip Tray Drain*, 3/4-in. (20 mm) NPS drain.

#### 4.1.5 Cast Brass:

4.1.5.1 *Faucet*, lever-lock, self-closing, 3/4-in. (20 mm) outside diameter, male threaded.<sup>9</sup>

4.1.5.2 *Drip Tray Drain Plug and Tank Bottom Drain Plug*, 3/4-in. (20 mm) NPS.

4.1.6 *Cast Aluminum*, self-closing, spring-action type, one-piece, filler spout cover lever.

4.2 *Manufacture*—All sheet metal seams shall be welded.

### 5. Dimensions and Weight

5.1 The dimensions in Fig. 1 are recommended nominal dimensions. Weights are estimated and are not critical. Volume of tanks shall be 5 and 10 gal (20 and 40 L), respectively.

### 6. Workmanship, Finish, and Appearance

6.1 Workmanship on tank, stand, and drip pan shall be of sufficient quality to prevent dirt accumulation. Welding shall have small, even beading, free of slag and spatter. Surface of all castings shall be of uniform texture, without cracks, pitting, or flashing.

<sup>2</sup>Regulations Governing Use

<sup>2</sup> *Annual Book of Dangerous Articles as Ship's Stores and Supplies on Board Vessels, available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS: ASTM Standards, Vol 01.04.*

<sup>3</sup>Available from Supervisor

<sup>3</sup> *Annual Book of Shipbuilding, New Orleans, LA: ASTM Standards, Vol 01.05.*

<sup>4</sup> *Discontinued 1981—Replaced by B 633, Annual Book of ASTM Standards, Vol-01-04: 02.05.*

<sup>5</sup> *Annual Book of ASTM Standards, Vol 01.053.*

<sup>6</sup> *Discontinued—Replaced by B-633;*

<sup>6</sup> *Annual Book of ASTM Standards, Vol-02-05: 01.06.*

<sup>8</sup> *Discontinued 2000—Replaced by A 1011/A 1011M, Annual Book of ASTM Standards, Vol 01.03.*

*Annual Book of ASTM Standards, Vol 01.06.*

<sup>9</sup> *Protectoseal 531G, available from The Protectoseal Co., 225 Foster Ave., Bensenville, IL 60106, or equivalent, has been found suitable for this purpose.*

Stand and drip tray shall have corners broken and all burrs removed.

6.2 Tank, column, bracket, and tray shall be covered with one coat 1.5 mils (0.05 mm) thick of a zinc rich primer. The stainless steel tank shall have no paint.

## 7. Testing Methods

7.1 Test each tank ~~and subject by~~ subjecting to an internal air pressure of 5 psi (35 kPa) with no visible seam leakage when subjected to underwater or soap bubble test.

## 8. Packaging

8.1 If required for shipping, tanks ~~shall be packaged individually in cartons suitable for freight handling.~~

## 9. Keywords

98.1 lubricating oil tanks; marine; marine storage tanks; marine technology; oil dispensers; ships; tanks

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