

	SURFACE VEHICLE STANDARD	SAE	J829 JUN2012
		Issued 1962-06 Stabilized 2012-06	
		Superseding J829 AUG2005	
Fuel Tank Filler Cap and Cap Retainer			

RATIONALE

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1. Scope

This SAE Standard was developed primarily for passenger car and truck applications for the sizes indicated, but it may be used in marine, industrial, and similar applications.

1.1 Purpose

The purpose of this document is to provide dimensions for three fuel tank filler cap types (vented, nonvented, and pressure-vacuum), and the corresponding cap retainers. Use of these dimensions preclude the use of a vented or nonvented cap with a pressure-vacuum cap retainer. In addition, these dimensions insure that a pressure-vacuum cap will not seal to a vented cap retainer. These dimensions will, however, allow the use of a pressure-vacuum cap on a nonvented cap retainer. (See Tables 1A and 1B and Figures 1 and 2.)

1.2 Rationale

This document was revised in accordance with the scheduled five year review. The text in paragraph 1.1 was clarified.

2. References

2.1 Applicable Publication

The following publication forms a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATION

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

SAE J1140—Filler Pipes and Openings of Motor Vehicle Fuel Tanks

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TABLE 1A—CAP AND RETAINER DIMENSIONS (A THROUGH F)

Nominal Filler Pipe Size (at Fuel Inlet)	Nominal Filler Pipe Size (at Fuel Inlet)	A	A	B	B	C	C	D	D	E	E	F	F
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Nonvented													
44.5 ⁽¹⁾	1.75 ⁽¹⁾	30.7–31.2	1.21–1.23	37.1–37.8	1.46–1.49	11.9–13.0	0.47–0.51	7.1–7.9	0.28–0.31	9.1–9.7	0.36–0.38	0.3–0.8	0.01–0.03
50.8	2.00	34.8–35.6	1.37–1.40	41.7–42.9	1.64–1.69	11.9–13.0	0.47–0.51	7.6–8.4	0.30–0.33	9.9–10.4	0.39–0.41	0.3–0.8	0.01–0.03
57.2	2.25	38.6–39.4	1.52–1.55	48.3–49.8	1.90–1.96	11.9–13.0	0.47–0.51	8.6–9.4	0.34–0.37	11.4–12.2	0.45–0.48	0.3–0.8	0.01–0.03
Vented													
44.5 ⁽¹⁾	1.75 ⁽¹⁾	30.7–31.2	1.21–1.23	37.1–37.8	1.46–1.49	6.6–7.6	0.26–0.30	3.3–4.1	0.13–0.16	5.1–5.6	0.20–0.22	0.3–0.8	0.01–0.03
50.8	2.00	34.8–35.6	1.37–1.40	41.7–42.9	1.64–1.69	6.6–7.6	0.26–0.30	2.8–3.6	0.11–0.14	5.1–5.6	0.20–0.22	0.3–0.8	0.01–0.03
57.2	2.25	38.6–39.4	1.52–1.55	48.3–49.8	1.90–1.96	6.6–7.6	0.26–0.30	2.3–3.0	0.09–0.12	5.1–5.6	0.20–0.22	0.3–0.8	0.01–0.03
Pressure-Vacuum													
50.8	2.00	34.8–35.6	1.37–1.40	41.7–42.9	1.64–1.69	6.6–7.6	0.26–0.30	7.6–8.4	0.30–0.33	9.9–10.4	0.39–0.41	0.3–0.8	0.01–0.03
57.2	2.25	38.6–39.4	1.52–1.55	48.3–49.8	1.90–1.96	6.6–7.6	0.26–0.30	8.6–9.4	0.34–0.37	11.4–12.2	0.45–0.48	0.3–0.8	0.01–0.03

1. The 44.5 mm (1.75 in) filler pipe inlet size is not recommended for passenger cars and trucks. Application refers to SAE J1140.

TABLE 1B—CAP AND RETAINER DIMENSIONS (G THROUGH DEG X)

Nominal Filler Pipe Size (at Fuel Inlet)	Nominal Filler Pipe Size (at Fuel Inlet)	G	G	H, Min	H, Min	J	J	K	K	L	L	Deg X
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	±4
Nonvented												
44.5 ⁽¹⁾	1.75 ⁽¹⁾	12.2–13.0	0.48–0.51	3.0	0.12	35.6–36.3	1.40–1.43	29.7–30.2	1.17–1.19	9.1–10.2	0.36–0.40	130
50.8	2.00	13.7–14.5	0.54–0.57	3.0	0.12	39.9–41.4	1.57–1.63	33.8–34.5	1.33–1.36	9.1–10.2	0.36–0.40	140
57.2	2.25	15.2–16.0	0.60–0.63	3.0	0.12	45.7–47.2	1.80–1.86	37.6–38.4	1.48–1.51	9.1–10.2	0.36–0.40	140
Vented												
44.5 ⁽¹⁾	1.75 ⁽¹⁾	7.6–8.4	0.30–0.33	3.0	0.12	35.6–36.3	1.40–1.43	29.7–30.2	1.17–1.19	5.3–6.1	0.21–0.24	130
50.8	2.00	7.6–8.4	0.30–0.33	3.0	0.12	39.9–41.4	1.57–1.63	33.8–34.5	1.33–1.36	5.3–6.1	0.21–0.24	140
57.2	2.25	7.6–8.4	0.30–0.33	3.0	0.12	45.7–47.2	1.80–1.86	37.6–38.4	1.48–1.51	5.3–6.1	0.21–0.24	140
Pressure-Vacuum												
50.8	2.00	13.7–14.5	0.54–0.57	3.0	0.12	39.9–41.4	1.57–1.63	33.8–34.5	1.33–1.36	5.3–6.1	0.21–0.24	140
57.2	2.25	15.2–16.0	0.60–0.63	3.0	0.12	45.7–47.2	1.80–1.86	37.6–38.4	1.48–1.51	5.3–6.1	0.21–0.24	140

1. The 44.5 mm (1.75 in) filler pipe inlet size is not recommended for passenger cars and trucks. Application refers to SAE J1140.

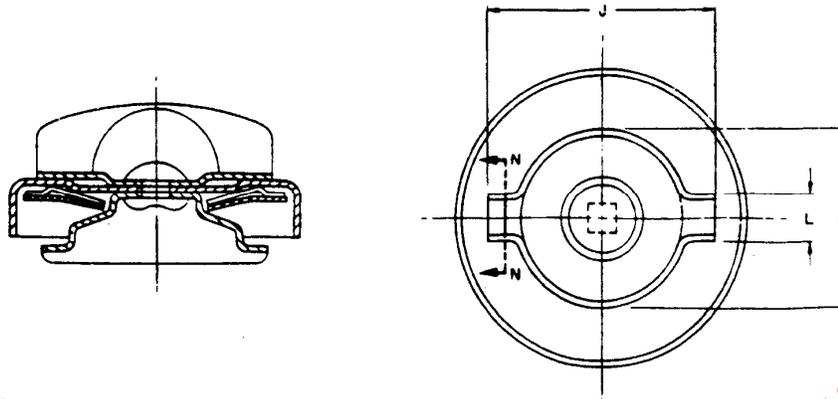


FIGURE 1—CAP

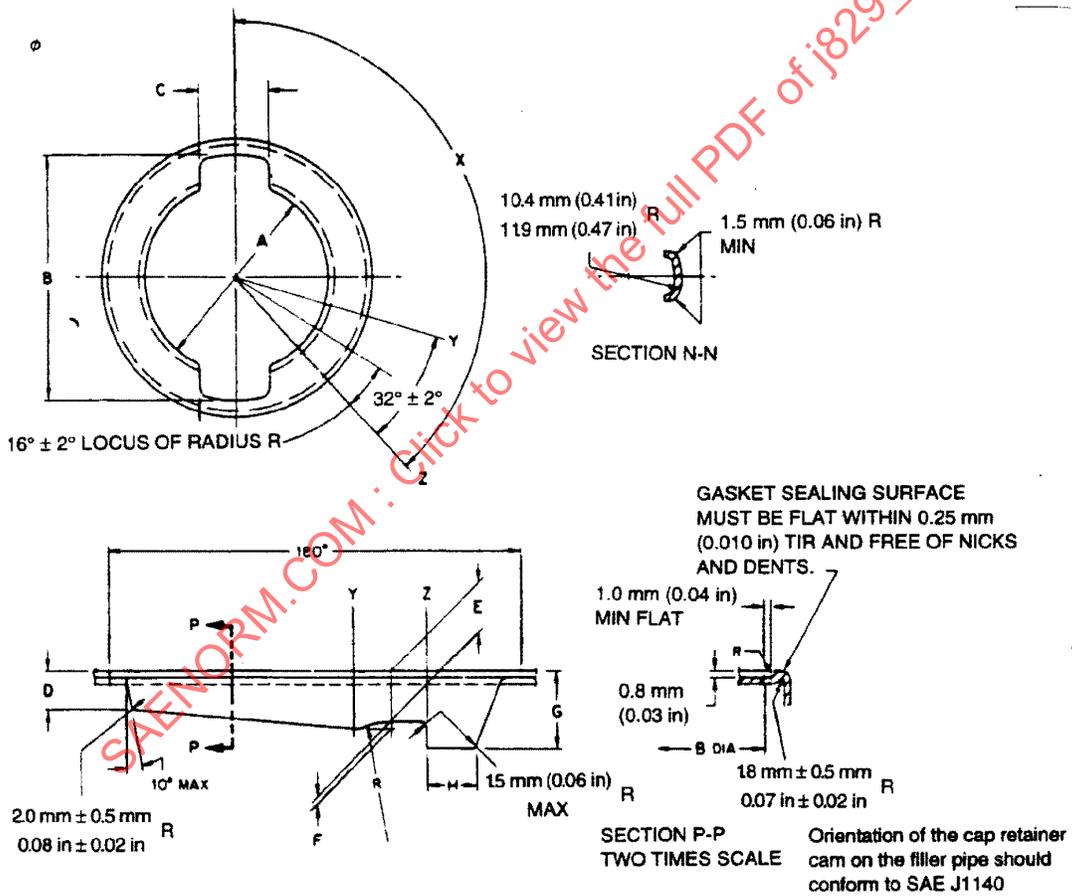


FIGURE 2—CAP RETAINER