

Submitted for recognition as an American National Standard

Fuel Tank Filler Cap and Cap Retainer

Foreword—This reaffirmed document has been changed only to reflect the new SAE Technical Standards Board format.

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 vented, nonvented, and pressure-vacuum fuel tank filler caps and cap retainers. Use of these dimensions will preclude the use of a vented or nonvented cap with a pressure-vacuum cap retainer. In addition, these dimensions insure that if use of a pressure-vacuum cap is attempted with a vented cap retainer, it will not seal. They 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.)

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) mm	Nominal Filler Pipe Size (at Fuel Inlet) in	A	A	B	B	C	C	D	D	E	E	F	F
		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) mm	Nominal Filler Pipe Size (at Fuel Inlet) in	G	G	H, Min	H, Min	J	J	K	K	L	L	Deg X ±4
		mm	in	mm	in	mm	in	mm	in	mm	in	
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.

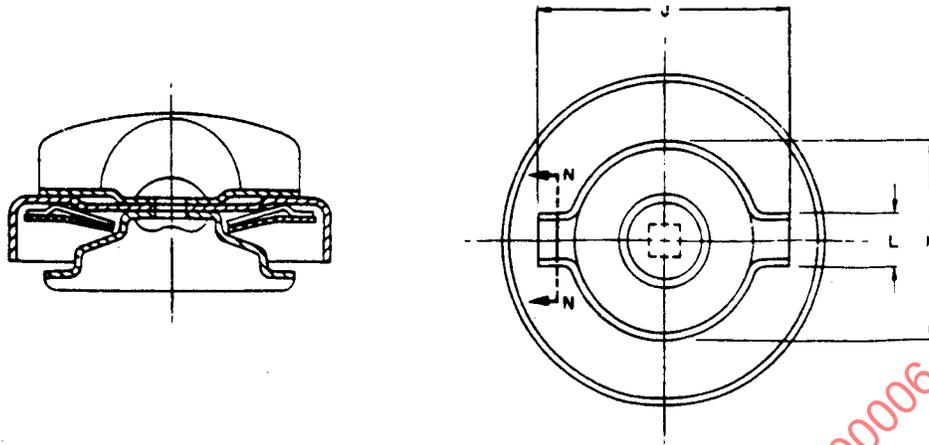


FIGURE 1—CAP

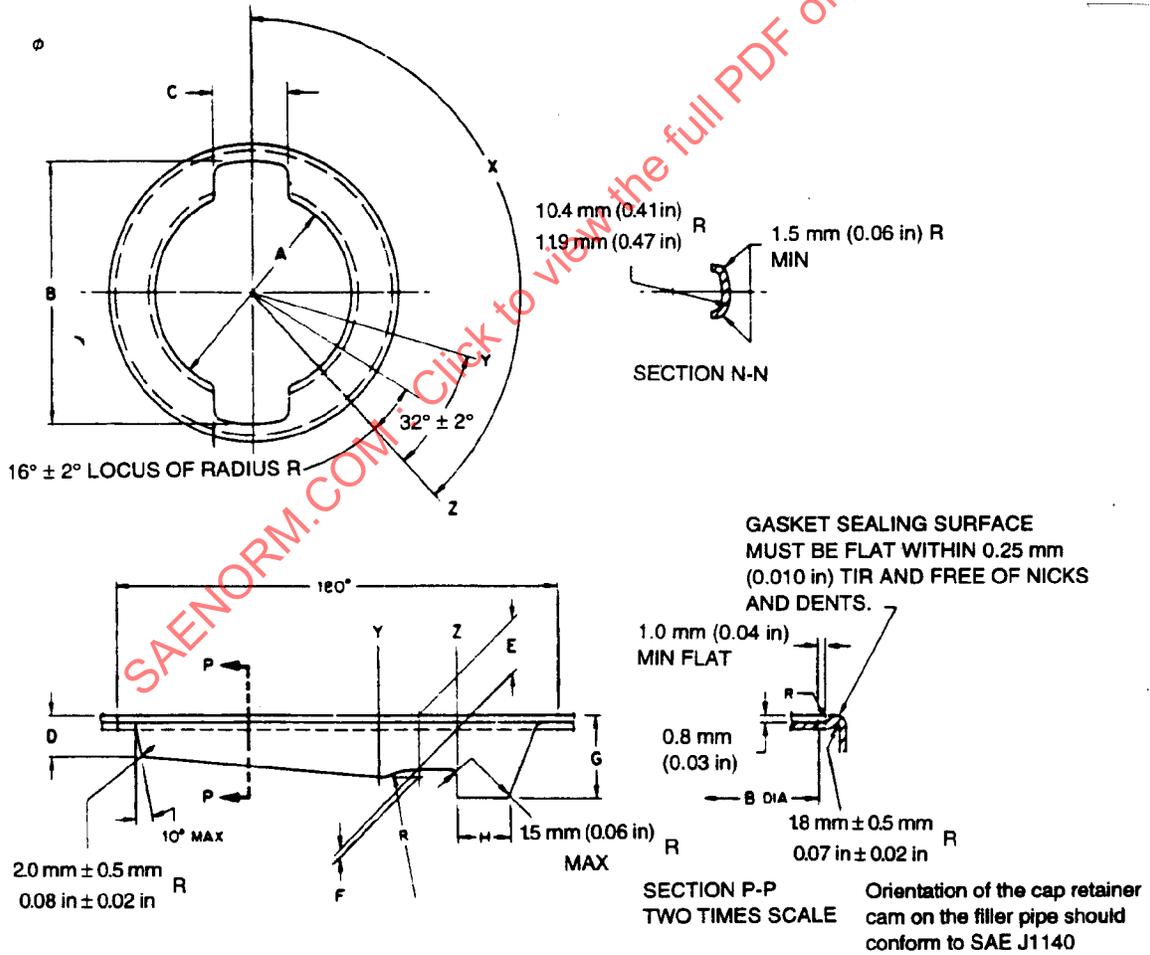


FIGURE 2—CAP RETAINER

PREPARED BY THE SAE FUEL FILLER CAP AND PIPE INTERFACE STANDARDS COMMITTEE