

	SURFACE VEHICLE STANDARD	SAE	J164 MAR2011
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		Superseding J164 FEB2005	
(R) Radiator Caps and Filler Necks			

RATIONALE

Document has been updated to add "Large" cap and filler-neck dimensions and combined graphics.

1. SCOPE

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

1.1 Purpose

The purpose of this document is to provide dimensions for the different pressure ratings of bayonet type radiator pressure caps and filler necks. Use of these dimensions will preclude the use of a high-pressure rated cap on low-pressure systems for the small and medium size applications. (See Tables 1 to 4 and Figures 1 to 4.)

This document will allow use of low-pressure rated cap on a nominal high-pressure system.

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TABLE 1 - PRESSURE TYPE RADIATOR CAP

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	A mm	B mm	C mm	D mm	E Max mm
Mini						
83-110	12-16	10.70-11.70	11.20-12.00	39.2-40.0	43.43-43.80	66.0
97-124	14-18	10.70-11.70	11.20-12.00	39.2-40.0	43.43-43.80	66.0
Small						
21-34	3-5	10.92-11.94	14.73-15.62	50.80-52.32	57.15-57.79	80.26
41-55	6-8	14.22-15.24	14.73-15.62	50.80-52.32	57.15-57.79	80.26
62-76	9-11	14.22-15.24	14.73-15.62	50.80-52.32	57.15-57.79	80.26
83-110	12-16	20.83-21.84	14.73-15.62	50.80-52.32	57.15-57.79	80.26
97-124	14-18	20.83-21.84	14.73-15.62	50.80-52.32	57.15-57.79	80.26
Medium						
21-34	3-5	9.14-10.16	13.72-14.61	62.74-64.26	69.34-69.98	92.71
41-55	6-8	15.49-16.51	13.72-14.61	62.74-64.26	69.34-69.98	92.71
62-76	9-11	15.49-16.51	13.72-14.61	62.74-64.25	69.34-69.98	92.71
83-110	12-16	20.83-21.84	13.72-14.61	62.74-64.25	69.34-69.98	92.71
Large						
34-48	5-7	17.91-18.67	30.48-32.51	95.63-96.38	102.24-103.00	—

TABLE 2A - RADIATOR FILLER NECKS (F, G, H, I, AND J)

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	F mm	G mm	H mm	I mm	J mm
Mini						
83-110	12-16	38.40-39.00	12.19-13.21	42.80-43.20	31.10-31.7	5.08-5.33
97-124	14-18	38.40-39.00	12.19-13.21	42.80-43.20	31.10-31.7	5.08-5.33
Small						
21-34	3-5	49.78-50.29	12.19-13.21	56.39-56.77	41.15-41.53	5.46-5.72
41-55	6-8	49.78-50.29	15.24-16.26	56.39-56.77	41.15-41.53	5.46-5.72
62-76	9-11	49.78-50.29	15.24-16.26	56.39-56.77	41.15-41.53	5.46-5.72
83-110	12-16	49.78-50.29	21.84-22.86	56.39-56.77	41.15-41.53	5.46-5.72
97-124	14-18	49.78-50.29	21.84-22.86	56.39-56.77	41.15-41.53	5.46-5.72
Medium						
21-34	3-5	61.72-62.23	12.70-13.72	68.33-68.71	54.10-54.48	5.46-5.72
41-55	6-8	61.72-62.23	18.29-19.30	68.33-68.71	54.10-54.48	5.46-5.72
62-76	9-11	61.72-62.23	18.29-19.30	68.33-68.71	54.10-54.48	5.46-5.72
83-110	12-16	61.72-62.23	22.61-23.11	68.33-68.71	54.10-54.48	5.46-5.72
Large						
34-48	5-7	93.73-95.25	18.92-19.69	101.14-101.75	83.97-84.53	7.49-7.75

TABLE 2B - RADIATOR FILLER NECKS (K, L, M, N, P, AND R)

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	K mm	L mm	M mm	N Nom mm	P Min mm	R mm
Mini							
83-110	12-16	22.4-22.7	10.45-10.7	12.43-12.68	19.7	12.0	4.70-5.0
97-124	14-18	22.4-22.7	10.45-10.7	12.43-12.68	19.7	12.0	4.70-5.0
Small							
21-34	3-5	30.7-31.0	13.75-14.0	16.05-16.3	28.3	12.45	4.90-5.16
41-55	6-8	30.7-31.0	13.75-14.0	16.05-16.3	28.3	15.75	4.90-5.16
62-76	9-11	30.7-31.0	13.75-14.0	16.05-16.3	28.3	15.75	4.90-5.16
83-110	12-16	30.7-31.0	13.75-14.0	16.05-16.3	28.3	22.34	4.90-5.16
97-124	14-18	30.7-31.0	13.75-14.0	16.05-16.3	28.3	22.35	4.90-5.16
Medium							
21-34	3-5	—	13.05-13.3	15.35-15.6	40.70	10.67	4.90-5.16
41-55	6-8	—	13.05-13.3	15.35-15.6	40.70	17.02	4.90-5.16
62-76	9-11	—	13.05-13.3	15.35-15.6	40.70	17.02	4.90-5.16
83-110	12-16	—	13.05-13.3	15.35-15.6	40.70	22.35	4.90-5.16
Large							
34-48	5-7	72.90-73.16	30.35-30.61	33.39-33.65	—	19.43	5.46-6.22

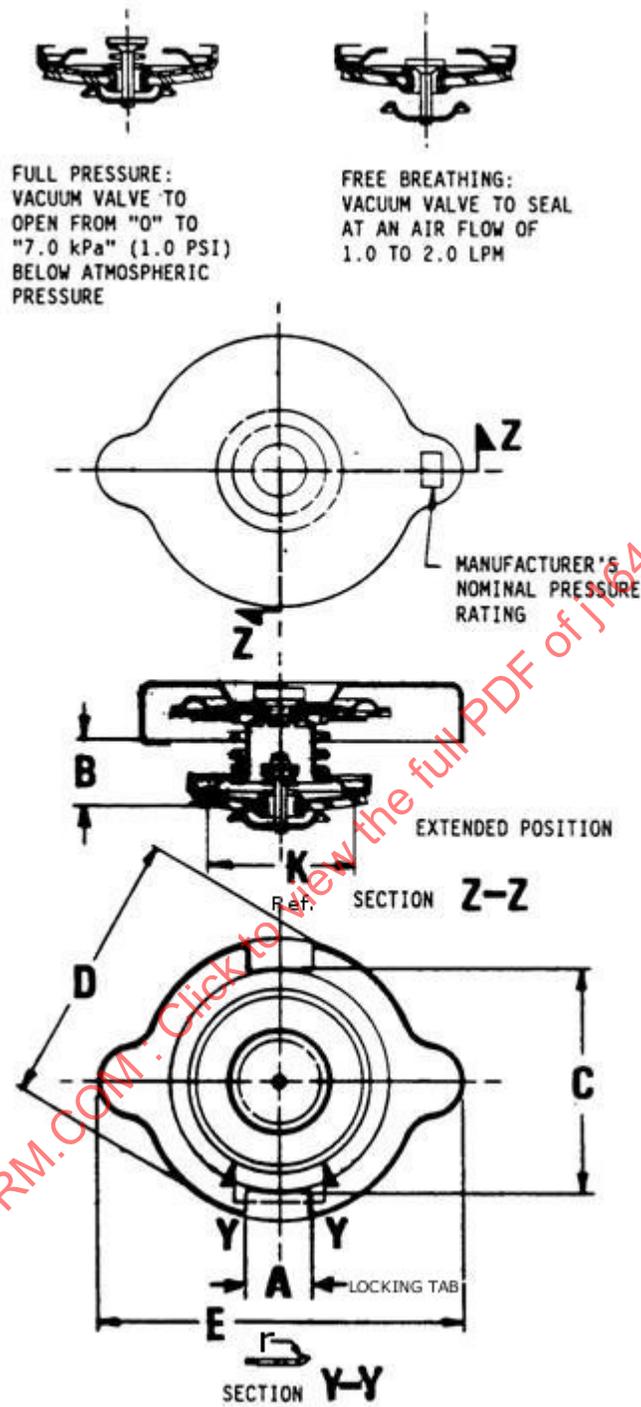


FIGURE 1 - PRESSURE TYPE RADIATOR CAP

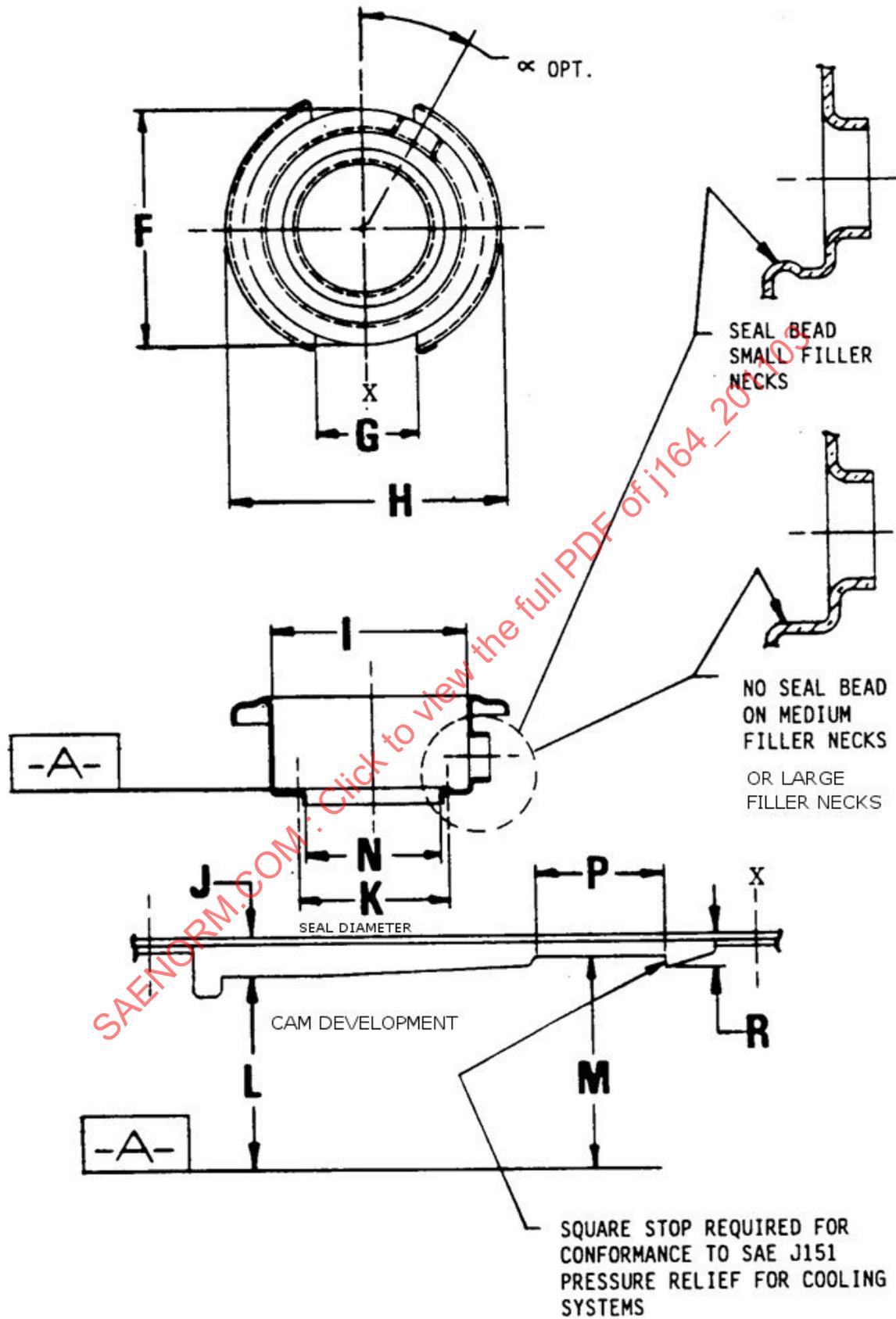


FIGURE 2 - RADIATOR FILLER NECKS