

	SURFACE VEHICLE STANDARD	SAE	J164 JUL2012
		Issued	1970-04
		Revised	2012-07
		Superseding J164 MAR2011	
Radiator Caps and Filler Necks			

RATIONALE

This document has been revised to improve illustration quality in portions of Figure 1 and Figure 2.

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 & 2 and Figures 1 to 3.)

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

SAENORM.COM : Click to view the full PDF of J164_201207

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2012 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
 Tel: +1 724-776-4970 (outside USA)
 Fax: 724-776-0790
 Email: CustomerService@sae.org
 SAE WEB ADDRESS: http://www.sae.org

<p style="text-align: center;"> SAE values your input. To provide feedback on this Technical Report, please visit http://www.sae.org/technical/standards/J164_201207 </p>

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 K)

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	F mm	G mm	H mm	I mm	J mm	K 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	22.4-22.7
97-124	14-18	38.40-39.00	12.19-13.21	42.80-43.20	31.10-31.7	5.08-5.33	22.4-22.7
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	30.7-31.0
41-55	6-8	49.78-50.29	15.24-16.26	56.39-56.77	41.15-41.53	5.46-5.72	30.7-31.0
62-76	9-11	49.78-50.29	15.24-16.26	56.39-56.77	41.15-41.53	5.46-5.72	30.7-31.0
83-110	12-16	49.78-50.29	21.84-22.86	56.39-56.77	41.15-41.53	5.46-5.72	30.7-31.0
97-124	14-18	49.78-50.29	21.84-22.86	56.39-56.77	41.15-41.53	5.46-5.72	30.7-31.0
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	72.90-73.16

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

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	L mm	M mm	N Nom mm	P Min mm	R mm	S mm
Mini							
83-110	12-16	10.45-10.7	12.43-12.68	19.7	12.0	4.70-5.0	12.0-13.0
97-124	14-18	10.45-10.7	12.43-12.68	19.7	12.0	4.70-5.0	12.0-13.0
Small							
21-34	3-5	13.75-14.0	16.05-16.3	28.3	12.45	4.90-5.16	12.0-13.0
41-55	6-8	13.75-14.0	16.05-16.3	28.3	15.75	4.90-5.16	15.5-16.5
62-76	9-11	13.75-14.0	16.05-16.3	28.3	15.75	4.90-5.16	15.5-16.5
83-110	12-16	13.75-14.0	16.05-16.3	28.3	22.34	4.90-5.16	22.0-23.0
97-124	14-18	13.75-14.0	16.05-16.3	28.3	22.35	4.90-5.16	22.0-23.0
Medium							
21-34	3-5	13.05-13.3	15.35-15.6	40.70	10.67	4.90-5.16	10.5-11.5
41-55	6-8	13.05-13.3	15.35-15.6	40.70	17.02	4.90-5.16	16.5-17.5
62-76	9-11	13.05-13.3	15.35-15.6	40.70	17.02	4.90-5.16	16.5-17.5
83-110	12-16	13.05-13.3	15.35-15.6	40.70	22.35	4.90-5.16	22.0-23.0
Large							
34-48	5-7	30.35-30.61	33.39-33.65	—	19.43	5.46-6.22	19.0-20.0

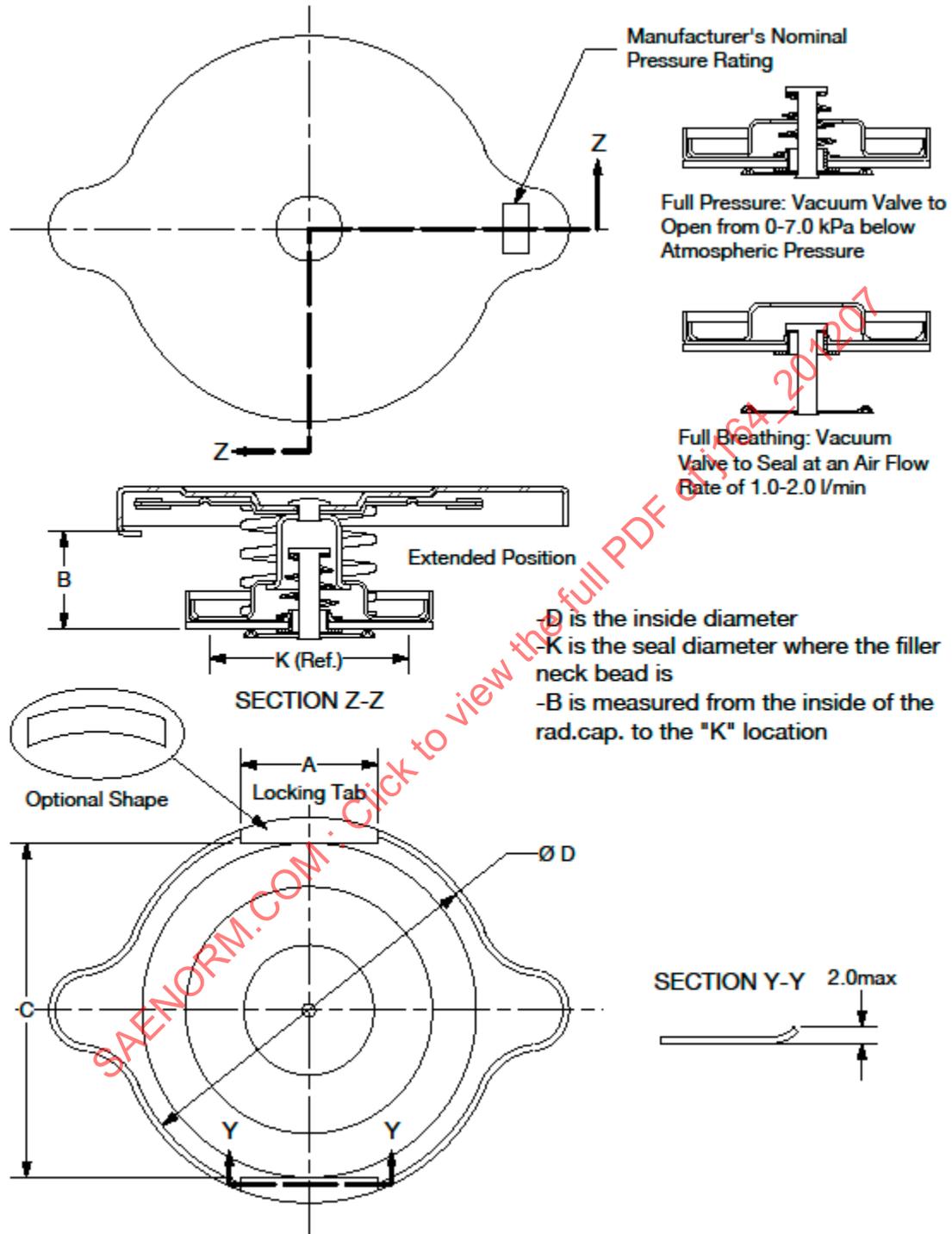


FIGURE 1 – PRESSURE TYPE RADIATOR CAPS

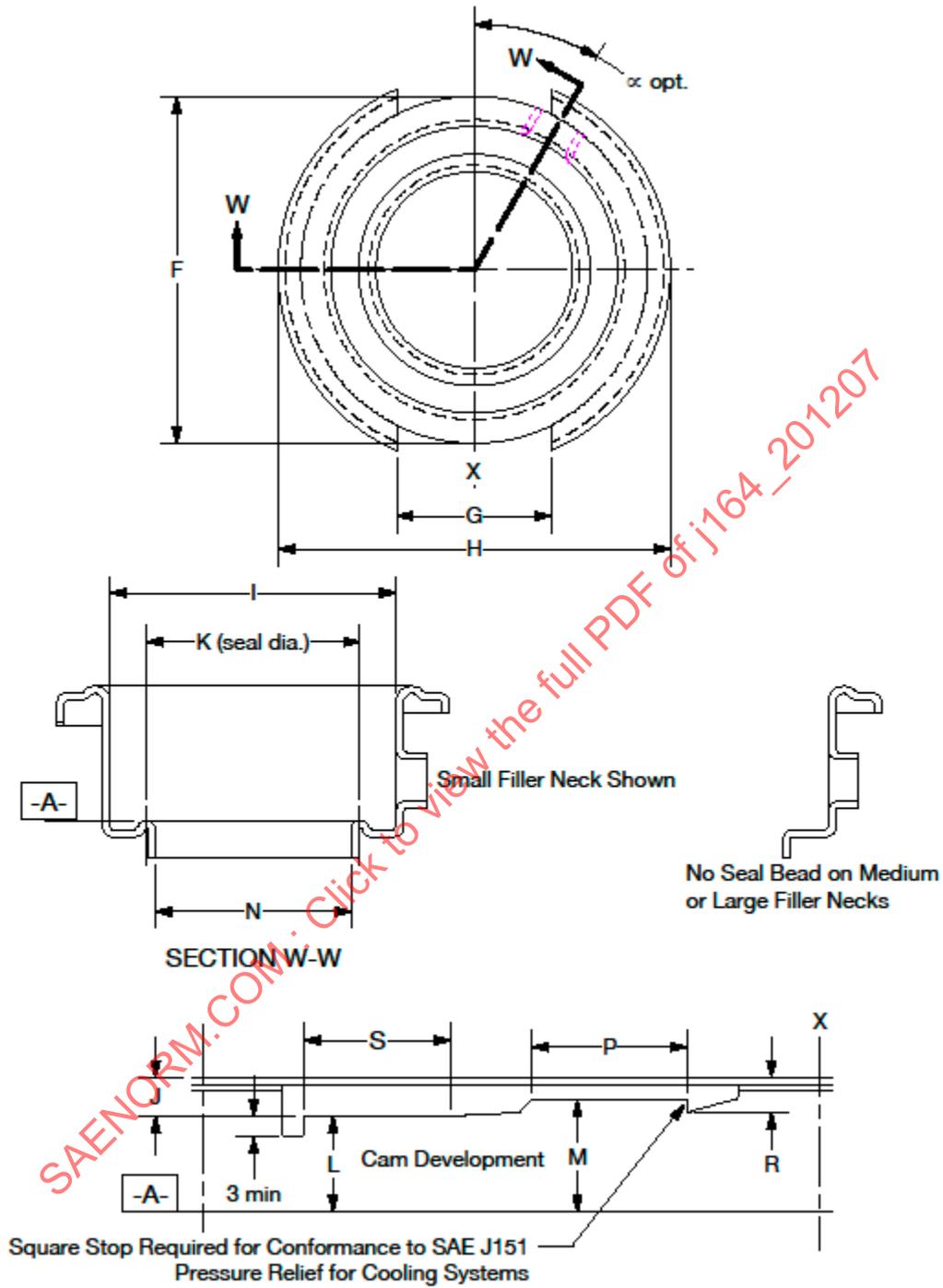


FIGURE 2 – RADIATOR FILLER NECKS