

**(R) RADIATOR CAPS AND FILLER
NECKS—SAE J164 JUN91****SAE Standard**

Report of the Engine Committee, approved April 1970, last revised March 1982. Completely revised by the SAE Cooling Systems Standards Committee June 1991.

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 boyonet 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 Figures 1 to 4 and Tables 1 to 4).

This document will allow use of low pressure rated cap on a nominal

high pressure system.

2. References

2.1 Applicable Documents—The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

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

SAE J151—Pressure Relief for Cooling System

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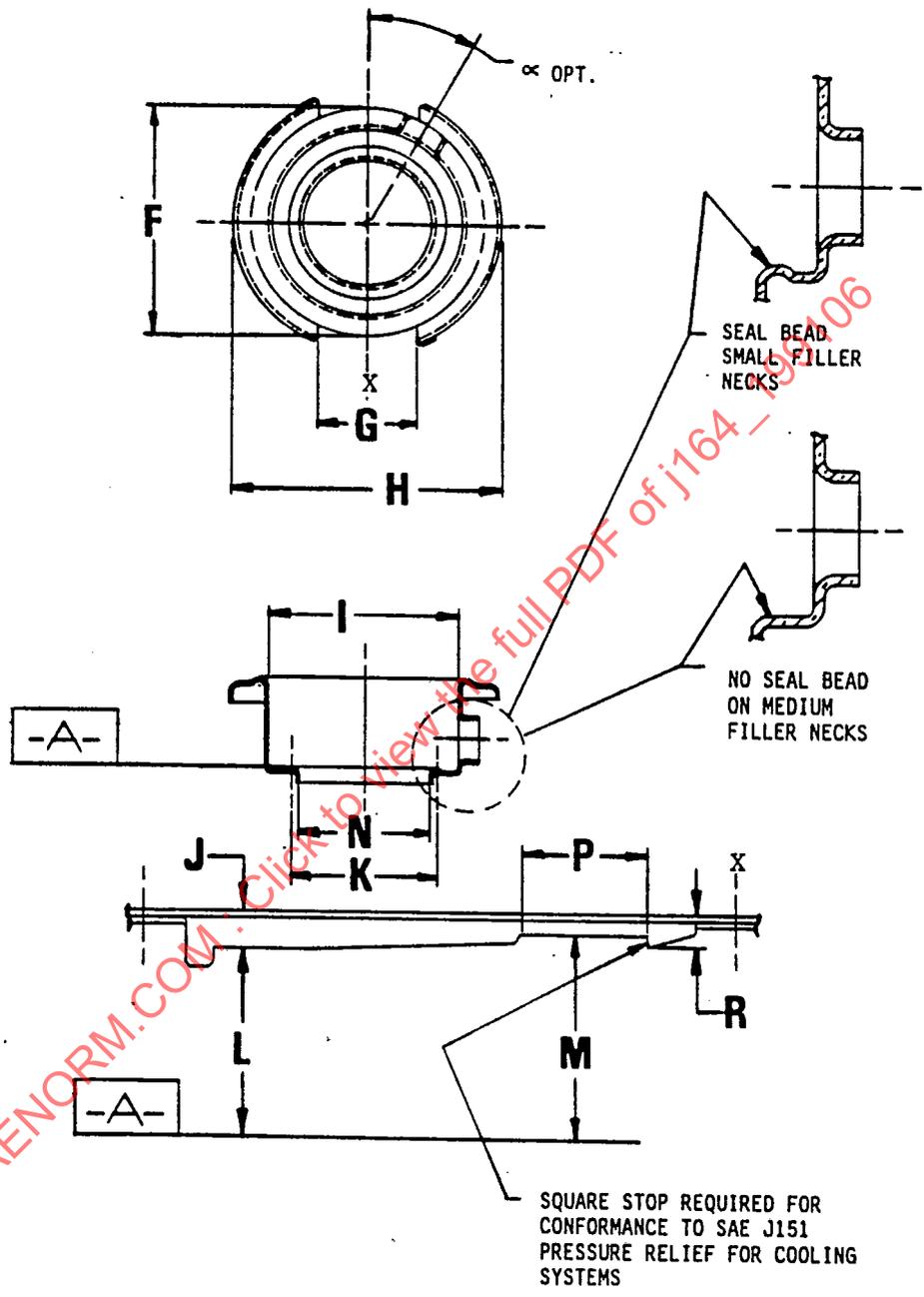


FIGURE 2—RADIATOR FILLER NECKS

TABLE 1—PRESSURE TYPE RADIATOR CAP

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	A mm	B mm	C mm	D mm	E 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	62.74-64.26	69.34-69.98	92.71
83-110	12-16	20.83-21.84	13.72-14.61	62.74-64.26	69.34-69.98	92.71

TABLE 2—RADIATOR FILLER NECKS

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	41.14-41.53	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

TABLE 2—(CONTINUED)

Nominal Pressure Rating kPa	Nominal Pressure Rating psi	K mm	L mm	M mm	N Nom mm	P Min R mm mm
Mini						
83-110	12-16	22.4-22.7	10.45-10.7	12.43-12.68	19.7	12.04.70-5.0
97-124	14-18	22.4-22.7	10.45-10.7	12.43-12.68	19.7	12.04.70-5.0
Small						
21-34	3-5	30.7-31.0	13.75-14.0	16.05-16.3	28.3	12.454.90-5.16
41-55	6-8	30.7-31.0	13.75-14.0	16.05-16.3	28.3	15.754.90-5.16
62-76	9-11	30.7-31.0	13.75-14.0	16.05-16.3	28.3	15.754.90-5.16
83-110	12-16	30.7-31.0	13.75-14.0	16.05-16.3	28.3	22.354.90-5.16
97-124	14-18	30.7-31.0	13.75-14.0	16.05-16.3	28.3	22.354.90-5.16
Medium						
21-34	3-5	-----	13.05-13.3	15.35-15.6	40.70	10.674.90-5.16
41-55	6-8	-----	13.05-13.3	15.35-15.6	40.70	17.024.90-5.16
62-76	9-11	-----	13.05-13.3	15.35-15.6	40.70	17.024.90-5.16
83-110	12-16	-----	13.05-13.3	15.35-15.6	40.70	22.354.90-5.16

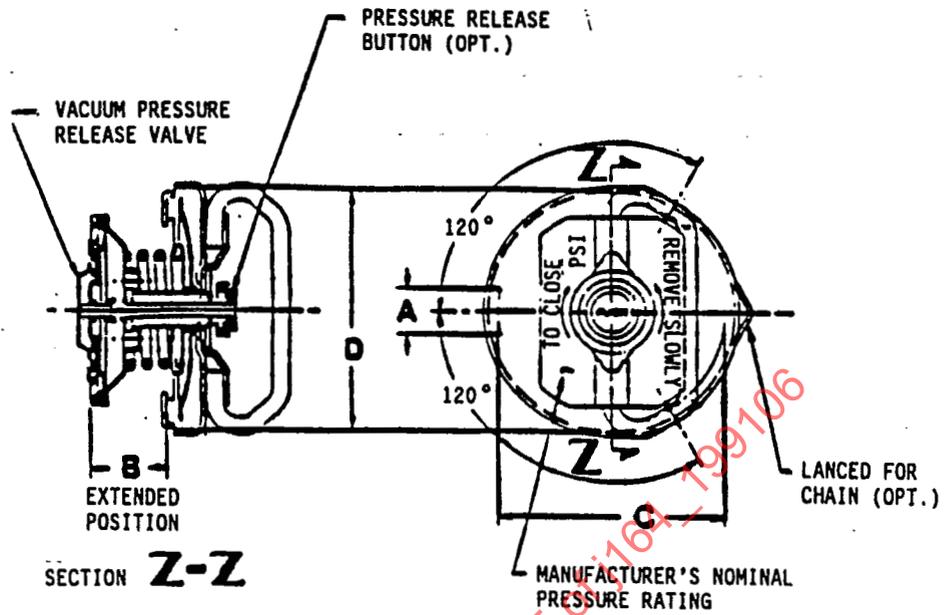
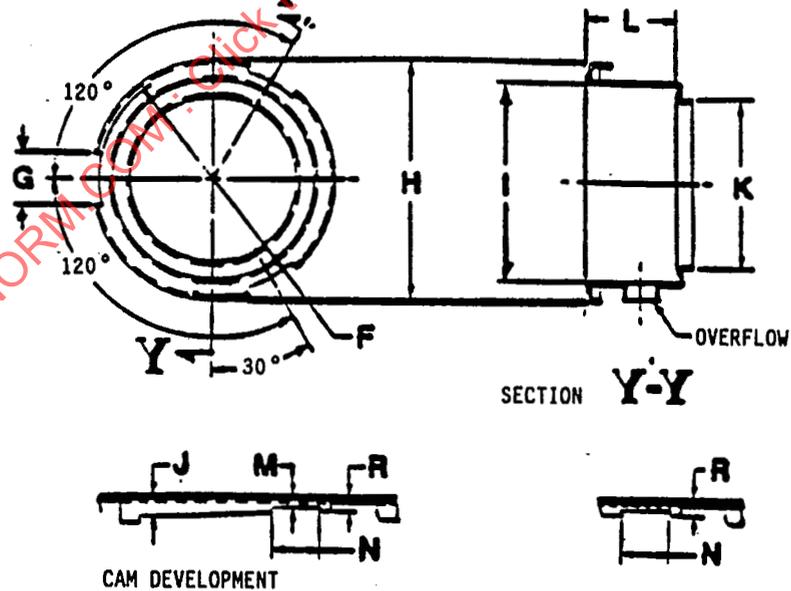


FIGURE 3—PRESSURE TYPE RADIATOR CAP



NOTE: SQUARE SAFETY STOP AND DIMENSIONS 'N' AND 'R' ARE RECOMMENDED.

FIGURE 4—RADIATOR FILLER NECK