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TWO PENNSYLVANIA PLAZA, NEW YORK, N. Y. 10001

AEROSPACE RECOMMENDED PRACTICE

ARP 568B

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SUPERSEDED

UNIFORM DASH NUMBERING SYSTEM FOR O-RINGS

CANCELLED

1. PURPOSE

- 1.1 The purpose of this ARP is to set forth a standardized dash numbering system for O-Rings.
- 1.2 It is intended to be used as a guide in the preparation of Company, Military, or other Standard Drawings for O-Rings. Each dash number, which should be appended to an appropriate Drawing or Standard number, identifies one nominal size O-Ring only.
- 1.3 No attempt is made in this ARP to indicate which of the O-Ring sizes listed under this system should be included in any particular Standard Drawing. Its only purpose is to standardize O-Ring sizes and dimensional tolerances and the means of identifying them dimensionally.

2. GENERAL NOTES

- 2.1 This revision differs from prior issues in Table format in the following respects:

Both Class I and Class II tolerances appear in the same Table.

Metric equivalents in International System (SI) units are given for all dimensions.

- 2.1.1 Calculation of the metric equivalents was done in accord with the rules appearing in SAE J916, rounding off tolerances as recommended in Paragraph 6.2.1, Method A, therein.
- 2.1.2 There are some small differences in basic volume (cu. in.) between this revision and ARP 568A. The ARP 568A revision was in error by these small amounts.
- 2.1.3 Additional sizes have been assigned and included in the Table as follows:

-102 thru -109
-201 thru -209
-309 thru -324



2.2 The fabrication shrinkage characteristics of all O-Ring materials are not identical but will allow size standardization according to two sets of dimensional tolerances, tabulated here as Class I and Class II. These Classes differ only by the tolerances specified for the O-Ring ID (inside diameter).

2.2.1 Class I tolerances are intended for O-Rings manufactured from materials that have low mold shrinkage characteristics, such as Nitrile (NBR) rubber or parts machined from materials such as polytetrafluoroethylene. The data for Class I O-Rings are identical to that in the "A" revision to ARP 568, except that the minimum ID for sizes -388 thru -391 has been increased by .005".

2.2.2 Class II tolerances are intended for O-Rings manufactured from materials that have high mold shrinkage characteristics, such as fluoroelastomer (FPM) compounds.

2.2.3 O-Ring sizes of the same dash numbers from Class I and Class II are interchangeable when used in properly designed glands such as MIL-P-5514.

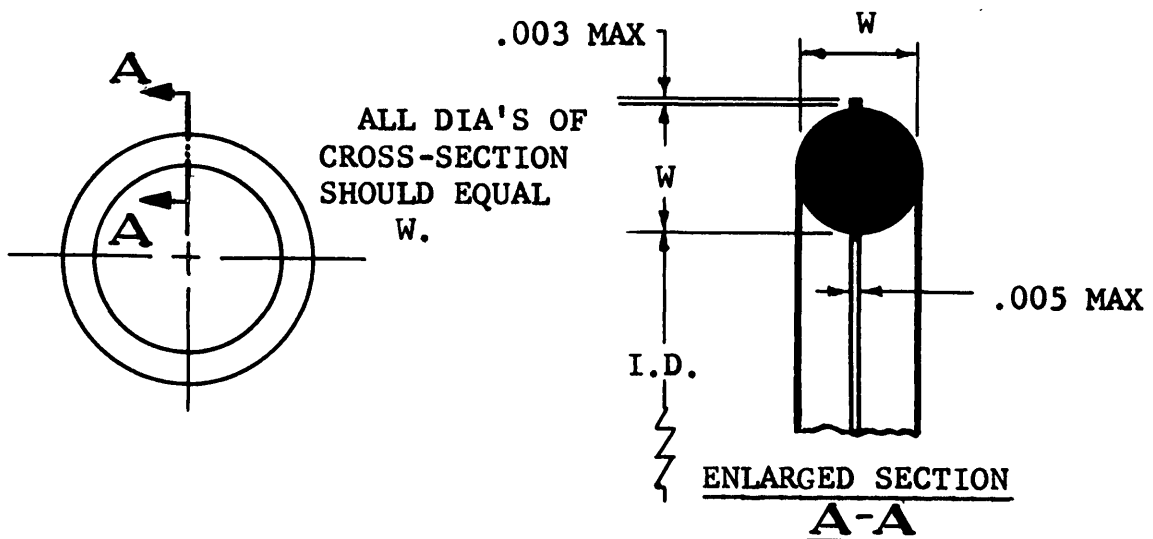
2.3 It should be noted that the Table is divided into two distinct sections as follows:

2.3.1 The main section, wherein the dash numbers are divided into groups of one hundred, and within each group are sequential and nonsignificant. Each hundred group, however, identifies the cross section size of the O-Rings within the group. For example, all .070 and smaller O-Ring cross sections fall into the group of -001 thru -099. The .103 cross section rings fall into the group of -100 thru -199, and so on.

2.3.2 The gasket section, shown on the last page of the Table, using the 900 series dash numbers, lists all of the presently standardized straight thread tube fitting boss gaskets. This series has traditionally utilized the significant dash numbering system, wherein the dash number designates the tube size in 16th's of an inch. This practice is also followed here, with the exception of the -901, which is intended for a .0938 inch nominal OD (outside diameter) tube, the .0625 inch OD tube not being in common aircraft use.

- 2.4 In the interest of standardization, it is requested that companies or agencies do not use the dash numbers in the following Table to which sizes have not been assigned. Sizes not assigned are indicated by an asterisk (*). Anyone feeling that any special size not now shown is widely enough used to justify standardization should direct such a request to the Elastic Seal Committee, SAE G-4 for coordination.

3. SKETCH



DASH NUMBER	CLASS I				CLASS II				CLASSES I AND II				VOLUME (REF.)	
	I.D. INCHES		I.D. MILLIMETERS		I.D. INCHES		I.C. MILLIMETERS		INCHES		MILLIMETERS		CUBIC INCHES	CUBIC CENTI- METERS
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.		
-001	0.025	0.033	0.635	0.838	0.023	0.035	0.58	0.89	0.037	0.043	0.940	1.092	0.0003	0.005
-002	0.038	0.046	0.965	1.168	0.036	0.048	0.91	1.22	0.047	0.053	1.194	1.346	0.0006	0.010
-003	0.052	0.060	1.321	1.524	0.050	0.062	1.27	1.57	0.057	0.063	1.448	1.600	0.0010	0.016
-004	0.065	0.075	1.65	1.90	0.064	0.076	1.63	1.93	0.067	0.073	1.702	1.854	0.0017	0.028
-005	0.096	0.106	2.44	2.65	0.095	0.107	2.41	2.72	0.067	0.073	1.702	1.854	0.0021	0.034
-006	0.109	0.119	2.77	3.02	0.108	0.120	2.74	3.05	0.067	0.073	1.702	1.854	0.0022	0.036
-007	0.140	0.150	3.56	3.81	0.139	0.151	3.53	3.84	0.067	0.073	1.702	1.854	0.0026	0.043
-008	0.171	0.181	4.34	4.60	0.170	0.182	4.32	4.62	0.067	0.073	1.702	1.854	0.0030	0.049
-009	0.203	0.213	5.16	5.41	0.202	0.214	5.13	5.44	0.067	0.073	1.702	1.854	0.0034	0.056
-010	0.234	0.244	5.94	6.20	0.232	0.246	5.89	6.25	0.067	0.073	1.702	1.854	0.0037	0.061
-011	0.296	0.306	7.52	7.77	0.294	0.308	7.47	7.82	0.067	0.073	1.702	1.854	0.0045	0.074
-012	0.359	0.369	9.12	9.37	0.357	0.371	9.07	9.42	0.067	0.073	1.702	1.854	0.0052	0.085
-013	0.421	0.431	10.65	10.55	0.419	0.433	10.64	11.00	0.067	0.073	1.702	1.854	0.0060	0.098
-014	0.484	0.494	12.29	12.55	0.482	0.496	12.24	12.60	0.067	0.073	1.702	1.854	0.0068	0.111
-015	0.546	0.556	13.87	14.12	0.544	0.558	13.82	14.17	0.067	0.073	1.702	1.854	0.0075	0.122
-016	0.609	0.619	15.47	15.72	0.605	0.623	15.37	15.82	0.067	0.073	1.702	1.854	0.0083	0.136
-017	0.671	0.681	17.04	17.30	0.667	0.685	16.94	17.40	0.067	0.073	1.702	1.854	0.0090	0.147
-018	0.734	0.744	18.64	18.90	0.730	0.748	18.54	19.00	0.067	0.073	1.702	1.854	0.0098	0.161
-019	0.795	0.805	20.15	20.50	0.792	0.810	20.12	20.57	0.067	0.073	1.702	1.854	0.0105	0.172
-020	0.858	0.870	21.79	22.10	0.855	0.873	21.72	22.17	0.067	0.073	1.702	1.854	0.0113	0.185
-021	0.920	0.932	23.37	23.67	0.917	0.935	23.29	23.75	0.067	0.073	1.702	1.854	0.0120	0.197
-022	0.983	0.995	24.57	25.27	0.979	0.999	24.87	25.37	0.067	0.073	1.702	1.854	0.0128	0.210
-023	1.045	1.057	26.54	26.85	1.041	1.061	26.44	26.95	0.067	0.073	1.702	1.854	0.0136	0.223
-024	1.108	1.120	28.14	28.45	1.104	1.124	28.04	28.55	0.067	0.073	1.702	1.854	0.0143	0.234
-025	1.170	1.182	29.72	30.62	1.165	1.187	29.59	30.15	0.067	0.073	1.702	1.854	0.0151	0.247
-026	1.233	1.245	31.32											

UNIFORM DASH NUMBERING SYSTEM FOR O-RINGS - ARP 568 B (CONTINUED)

DASH NUMBER	CLASS I		I.D.		CLASS II		I.C.		CLASSES I AND II		VOLUME		(REF.) CUBIC CENTI- METERS	
	I.D. INCHES MIN.	I.D. INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS MAX.	I.D. INCHES MIN.	I.D. INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS MAX.	INCHES MIN.	INCHES MAX.	CUBIC INCHES MIN.	CUBIC INCHES MAX.		
-031	1.729	1.745	43.92	44.42	1.724	1.754	43.75	44.55	0.067	0.073	1.702	1.854	0.0219	0.359
-032	1.854	1.874	47.09	47.60	1.849	1.879	46.96	47.73	0.067	0.073	1.702	1.854	0.0234	0.383
-033	1.979	1.999	50.27	50.77	1.971	2.007	50.06	50.58	0.067	0.073	1.702	1.854	0.0249	0.408
-034	2.104	2.124	53.44	53.95	2.096	2.132	53.24	54.15	0.067	0.073	1.702	1.854	0.0264	0.433
-035	2.229	2.249	56.62	57.12	2.221	2.257	56.41	57.33	0.067	0.073	1.702	1.854	0.0279	0.457
-036	2.354	2.374	59.79	60.30	2.346	2.382	59.59	60.50	0.067	0.073	1.702	1.854	0.0294	0.482
-037	2.479	2.499	62.97	63.47	2.471	2.507	62.76	63.68	0.067	0.073	1.702	1.854	0.0309	0.506
-038	2.604	2.624	66.14	66.65	2.594	2.634	65.89	66.90	0.067	0.073	1.702	1.854	0.0325	0.533
-039	2.724	2.754	69.19	69.95	2.719	2.759	69.06	70.08	0.067	0.073	1.702	1.854	0.0340	0.557
-040	2.849	2.879	72.36	73.13	2.844	2.884	72.24	73.25	0.067	0.073	1.702	1.854	0.0355	0.582
-041	2.974	3.004	75.54	76.30	2.965	3.013	75.31	76.53	0.067	0.073	1.702	1.854	0.0370	0.606
-042	3.224	3.254	81.89	82.65	3.215	3.263	81.66	82.88	0.067	0.073	1.702	1.854	0.0400	0.655
-043	3.474	3.504	88.24	89.00	3.465	3.513	88.01	89.23	0.067	0.073	1.702	1.854	0.0430	0.705
-044	3.724	3.754	94.59	95.35	3.712	3.766	94.28	95.66	0.067	0.073	1.702	1.854	0.0461	0.755
-045	3.974	4.004	100.94	101.70	3.962	4.016	100.63	102.01	0.067	0.073	1.702	1.854	0.0491	0.805
-046	4.224	4.254	107.29	108.05	4.209	4.269	106.91	108.43	0.067	0.073	1.702	1.854	0.0521	0.854
-047	4.474	4.504	113.64	114.40	4.459	4.519	113.26	114.78	0.067	0.073	1.702	1.854	0.0551	0.903
-048	4.724	4.754	119.99	120.75	4.709	4.769	119.61	121.13	0.067	0.073	1.702	1.854	0.0581	0.952
-049	4.966	5.012	126.14	127.30	4.952	5.026	125.78	127.66	0.067	0.073	1.702	1.854	0.0612	1.003
-050	5.216	5.262	132.49	133.65	5.202	5.276	132.13	134.01	0.067	0.073	1.702	1.854	0.0642	1.052
*051 THRU *101	* O-RING SIZES NOT ASSIGNED													
-102	0.044	0.054	1.12	1.37	0.043	0.055	1.09	1.40	0.100	0.106	2.540	2.692	0.0040	0.066
-103	0.076	0.086	1.93	2.18	0.075	0.087	1.90	2.21	0.100	0.106	2.540	2.692	0.0048	0.079
-104	0.107	0.117	2.72	2.97	0.106	0.118	2.69	3.00	0.100	0.106	2.540	2.692	0.0056	0.092
-105	0.138	0.148	3.51	3.76	0.137	0.149	3.48	3.78	0.100	0.106	2.540	2.692	0.0064	0.105
-106	0.169	0.179	4.29	4.55	0.168	0.180	4.27	4.57	0.100	0.106	2.540	2.692	0.0073	0.120
-107	0.201	0.211	5.11	5.36	0.200	0.212	5.08	5.38	0.100	0.106	2.540	2.692	0.0081	0.133
-108	0.232	0.242	5.89	6.15	0.230	0.244	5.84	6.20	0.100	0.106	2.540	2.692	0.0089	0.146
-109	0.294	0.304	7.47	7.72	0.292	0.306	7.42	7.77	0.100	0.106	2.540	2.692	0.0105	0.172
-110	0.357	0.367	9.07	9.32	0.355	0.369	9.02	9.37	0.100	0.106	2.540	2.692	0.0122	0.200