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SAE MA4017

FEDERAL SUPPLY CLASS
5365

RATIONALE

MA4017 HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

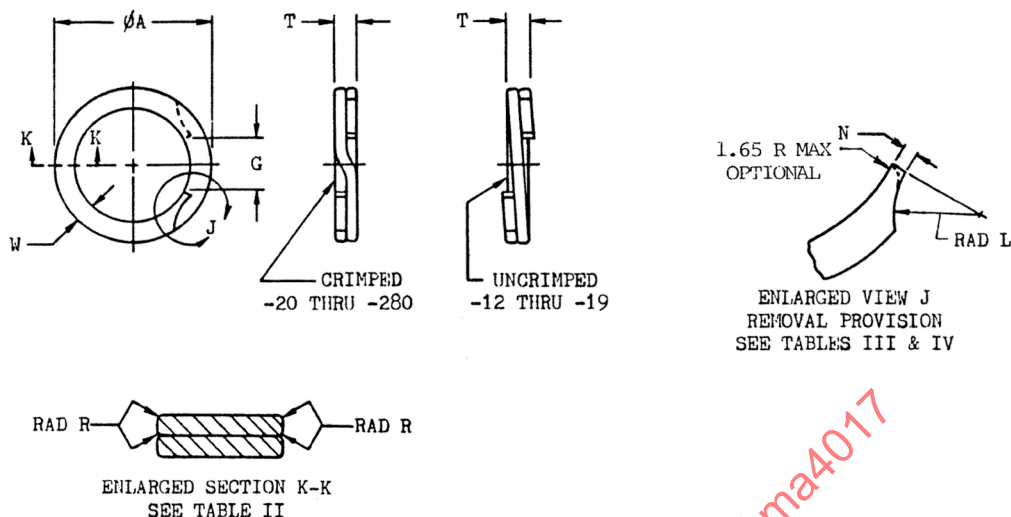
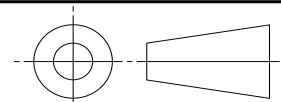


TABLE I. RING DIMENSIONS, FREE STATE

PART NO.	NOM BORE DIA	FREE (O.D.) ϕA	(THICKNESS) T	(RADIAL WALL) W	(FREE GAP) G	APPROX MASS kg/1000
SELECTED HEAVY DUTY SIZES						
MA4017-12	12	12.89 - 13.24	0.55 - 0.65	1.02 - 1.22	7.90 - 11.15	0.30
MA4017-13	13	13.95 - 14.30	0.84 - 0.94	1.02 - 1.22	7.90 - 11.15	0.33
MA4017-14	14	15.07 - 15.42	0.84 - 0.94	1.27 - 1.47	7.90 - 11.15	0.40
MA4017-15	15	16.14 - 16.49	0.84 - 0.94	1.27 - 1.47	7.90 - 11.15	0.43
MA4017-16	16	17.15 - 17.50	0.84 - 0.94	1.27 - 1.47	7.90 - 11.15	0.46
MA4017-17	17	18.32 - 18.67	0.84 - 0.94	1.52 - 1.73	8.70 - 11.90	0.58
MA4017-18	18	19.39 - 19.74	0.84 - 0.94	1.52 - 1.73	8.70 - 11.90	0.62
MA4017-19	19	20.48 - 20.83	0.84 - 0.94	1.52 - 1.73	8.70 - 11.90	0.66
MA4017-20	20	21.51 - 21.86	0.84 - 0.94	1.78 - 1.98	8.70 - 11.90	0.94
MA4017-21	21	22.56 - 22.91	0.84 - 0.94	1.78 - 1.98	8.70 - 11.90	1.00
MA4017-22	22	23.65 - 24.00	1.02 - 1.12	1.78 - 1.98	8.70 - 11.90	1.05
MA4017-23	23	24.69 - 25.04	1.02 - 1.12	2.03 - 2.24	8.70 - 11.90	1.24
MA4017-24	24	25.73 - 26.08	1.02 - 1.12	2.03 - 2.24	8.70 - 11.90	1.30
MA4017-25	25	27.03 - 27.38	1.02 - 1.12	2.03 - 2.24	9.50 - 12.75	1.36
MA4017-26	26	28.07 - 28.42	1.02 - 1.12	2.03 - 2.24	9.50 - 12.75	1.42
MA4017-27	27	29.11 - 29.46	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.09
MA4017-28	28	30.10 - 30.45	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.18
MA4017-29	29	31.21 - 31.56	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.27
MA4017-30	30	32.28 - 32.63	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.36
MA4017-31	31	33.32 - 33.67	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.44
MA4017-32	32	34.23 - 34.58	1.22 - 1.32	2.49 - 2.69	9.50 - 12.75	2.53
MA4017-34	34	36.46 - 36.81	1.22 - 1.32	2.87 - 3.07	9.50 - 12.75	3.06
MA4017-35	35	37.55 - 37.90	1.22 - 1.32	2.87 - 3.07	9.50 - 12.75	3.16

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/MA4017>

THIRD ANGLE PROJECTION



CUSTODIAN:E-25

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
An SAE International Group

METRIC AEROSPACE STANDARD

RING, RETAINING - INTERNAL, SPIRAL WOUND,
HEAVY & MEDIUM DUTY CRES, METRIC

SAE MA4017
SHEET 1 OF 5

TABLE I. RING DIMENSIONS, FREE STATE, (CONTINUED)

PART NO.	NOM BORE DIA	FREE (O.D.) ϕ A	(THICKNESS) T	(RADIAL WALL) W	(FREE GAP) G	APPROX MASS kg/1000
SELECTED HEAVY DUTY SIZES						
MA4017-36	36	38.68 - 39.03	1.22 - 1.32	2.87 - 3.07	10.30 - 15.10	3.24
MA4017-37	37	39.60 - 39.95	1.22 - 1.32	2.87 - 3.07	10.30 - 15.10	3.35
MA4017-38	38	40.77 - 41.12	1.22 - 1.32	2.87 - 3.07	10.30 - 15.10	3.45
MA4017-40	40	42.91 - 43.42	1.50 - 1.65	3.12 - 3.33	13.50 - 18.25	4.87
MA4017-42	42	45.01 - 45.52	1.50 - 1.65	3.12 - 3.33	13.50 - 18.25	5.13
MA4017-45	45	48.13 - 48.64	1.50 - 1.65	3.12 - 3.33	13.50 - 18.25	5.53
MA4017-46	46	49.28 - 49.79	1.50 - 1.65	3.12 - 3.33	13.50 - 18.25	5.67
MA4017-47	47	50.32 - 50.83	1.50 - 1.65	3.89 - 4.09	13.50 - 18.25	7.07
MA4017-48	48	51.46 - 51.97	1.50 - 1.65	3.89 - 4.09	13.50 - 18.25	7.25
MA4017-50	50	53.66 - 54.17	1.50 - 1.65	3.89 - 4.09	13.50 - 18.25	7.59
SELECTED MEDIUM DUTY SIZES						
MA4017-52	52	54.30 - 54.80	1.17 - 1.33	3.12 - 3.33	13.50 - 18.25	4.60
MA4017-53	53	55.32 - 55.82	1.17 - 1.33	3.12 - 3.33	13.50 - 18.25	4.80
MA4017-55	55	57.38 - 58.01	1.17 - 1.33	3.38 - 3.58	13.50 - 18.25	5.20
MA4017-56	56	58.40 - 59.03	1.17 - 1.33	3.38 - 3.58	13.50 - 18.25	5.30
MA4017-58	58	60.43 - 61.06	1.17 - 1.33	3.38 - 3.58	13.50 - 18.25	5.40
MA4017-59	59	61.54 - 62.17	1.17 - 1.33	3.38 - 3.58	13.50 - 18.25	5.55
MA4017-60	60	62.57 - 63.20	1.17 - 1.33	3.38 - 3.58	13.50 - 18.25	5.70
MA4017-61	61	63.65 - 64.28	1.17 - 1.33	3.63 - 3.84	13.50 - 18.25	5.90
MA4017-62	62	64.70 - 65.33	1.17 - 1.33	3.63 - 3.84	13.50 - 18.25	6.10
MA4017-63	63	65.70 - 66.33	1.17 - 1.33	3.63 - 3.84	18.25 - 23.05	6.25
MA4017-64	64	66.77 - 67.40	1.17 - 1.33	3.63 - 3.84	18.25 - 23.05	6.42
MA4017-65	65	67.82 - 68.45	1.17 - 1.33	3.63 - 3.84	18.25 - 23.05	6.60
MA4017-66	66	68.80 - 69.43	1.17 - 1.33	3.63 - 3.84	18.25 - 23.05	6.77
MA4017-67	67	69.90 - 70.53	1.17 - 1.33	3.63 - 3.84	18.25 - 23.05	6.94
MA4017-68	68	70.94 - 71.57	1.17 - 1.33	3.88 - 4.09	18.25 - 23.05	7.10
MA4017-69	69	71.94 - 72.57	1.17 - 1.33	3.88 - 4.09	18.25 - 23.05	7.20
MA4017-70	70	72.94 - 73.57	1.17 - 1.33	3.88 - 4.09	18.25 - 23.05	7.30
MA4017-71	71	73.99 - 74.62	1.17 - 1.33	3.88 - 4.09	18.25 - 23.05	7.70
MA4017-72	72	75.04 - 75.67	1.17 - 1.33	4.11 - 4.39	18.25 - 23.05	8.10
MA4017-75	75	78.07 - 78.70	1.17 - 1.33	4.11 - 4.39	18.25 - 23.05	8.50
MA4017-78	78	81.21 - 81.97	1.47 - 1.63	4.11 - 4.39	18.25 - 23.05	11.00
MA4017-80	80	83.22 - 83.98	1.47 - 1.63	4.37 - 4.62	22.20 - 28.60	11.60
MA4017-82	82	85.28 - 86.04	1.47 - 1.63	4.37 - 4.62	22.20 - 28.60	12.30
MA4017-85	85	88.38 - 89.14	1.47 - 1.63	4.62 - 4.88	22.20 - 28.60	13.00
MA4017-88	88	91.45 - 92.21	1.47 - 1.63	4.62 - 4.88	22.20 - 28.60	13.70
MA4017-90	90	93.58 - 94.34	1.47 - 1.63	4.88 - 5.13	22.20 - 28.60	14.50
MA4017-92	92	95.66 - 96.42	1.47 - 1.63	4.88 - 5.13	22.20 - 28.60	14.90
MA4017-95	95	98.69 - 99.45	1.47 - 1.63	4.88 - 5.13	22.20 - 28.60	15.60
MA4017-98	98	101.83 - 102.59	1.47 - 1.63	5.13 - 5.38	22.20 - 28.60	17.10
MA4017-100	100	103.83 - 104.59	1.47 - 1.63	5.13 - 5.38	27.00 - 33.35	17.50
MA4017-102	102	106.00 - 106.76	1.47 - 1.63	5.38 - 5.64	27.00 - 33.35	18.50
MA4017-105	105	109.00 - 109.90	1.47 - 1.63	5.38 - 5.64	27.00 - 33.35	19.60
MA4017-108	108	112.22 - 113.12	1.47 - 1.63	5.64 - 5.89	27.00 - 33.35	20.60
MA4017-110	110	114.25 - 115.15	1.47 - 1.63	5.64 - 5.89	27.00 - 33.35	21.00
MA4017-112	112	116.44 - 117.34	1.47 - 1.63	5.89 - 6.15	27.00 - 33.35	22.20
MA4017-115	115	119.44 - 120.34	1.47 - 1.63	5.89 - 6.15	27.00 - 33.35	23.00
MA4017-120	120	124.54 - 125.44	1.73 - 1.93	6.20 - 6.45	34.90 - 41.30	33.00
MA4017-125	125	129.59 - 130.49	1.73 - 1.93	6.20 - 6.45	34.90 - 41.30	35.00

TABLE I. RING DIMENSIONS, FREE STATE (CONTINUED)

PART NO.	NOM BORE DIA	FREE (O.D.) Ø A	(THICKNESS) T	(RADIAL WALL) W	(FREE GAP) G	APPROX MASS kg/1000
SELECTED MEDIUM DUTY SIZES						
MA4017-130	130	134.71 - 135.61	1.73 - 1.93	6.20 - 6.45	34.90 - 41.30	36.00
MA4017-135	135	139.74 - 140.88	1.73 - 1.93	6.20 - 6.45	34.90 - 41.30	37.00
MA4017-140	140	144.87 - 146.01	1.73 - 1.93	6.20 - 6.45	34.90 - 41.30	38.00
MA4017-145	145	150.04 - 151.18	1.73 - 1.93	6.20 - 6.45	41.30 - 47.60	40.00
MA4017-150	150	155.07 - 156.21	1.73 - 1.93	6.20 - 6.45	41.30 - 47.60	41.00
MA4017-155	155	160.72 - 162.12	2.08 - 2.28	7.72 - 8.03	41.30 - 47.60	63.00
MA4017-160	160	165.74 - 167.14	2.08 - 2.28	7.72 - 8.03	41.30 - 47.60	65.00
MA4017-165	165	170.77 - 172.17	2.08 - 2.28	7.72 - 8.03	41.30 - 47.60	67.00
MA4017-170	170	176.05 - 177.45	2.08 - 2.28	7.72 - 8.03	41.30 - 47.60	70.00
MA4017-175	175	181.05 - 182.45	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	72.00
MA4017-180	180	186.38 - 187.78	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	74.00
MA4017-185	185	191.10 - 192.75	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	76.00
MA4017-190	190	196.45 - 198.10	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	78.00
MA4017-195	195	201.74 - 203.39	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	80.00
MA4017-200	200	206.76 - 208.41	2.08 - 2.28	7.72 - 8.03	52.40 - 58.75	82.00
MA4017-210	210	217.10 - 218.75	2.08 - 2.28	9.32 - 9.63	52.40 - 58.75	104.00
MA4017-220	220	227.40 - 229.05	2.08 - 2.28	9.32 - 9.63	52.40 - 58.75	110.00
MA4017-230	230	237.73 - 239.38	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	114.00
MA4017-240	240	247.80 - 249.45	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	119.00
MA4017-250	250	258.10 - 259.75	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	123.00
MA4017-260	260	268.43 - 270.08	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	130.00
MA4017-270	270	278.50 - 280.15	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	133.00
MA4017-280	280	288.82 - 290.47	2.08 - 2.28	9.32 - 9.63	66.70 - 73.00	139.00

TABLE II.

DASH NO.	R
-12 THRU -18	0.08 - 0.15
-19 THRU -24	0.10 - 0.20
-25 THRU -29	0.13 - 0.23
-30 THRU -75	0.15 - 0.30
-78 THRU -115	0.20 - 0.38
-120 THRU -150	0.23 - 0.46
-155 THRU -280	0.28 - 0.53

TABLE III.

DASH NO.	L
-12 THRU -22	1.1 - 2.1
-23 THRU -38	4.3 - 5.3
-40 THRU -82	7.4 - 8.4
-85 THRU -280	12.2 - 13.2

TABLE IV.

DASH NO.	N
-12 & -13	0.33 - 0.66
-14 THRU -16	0.41 - 0.79
-17 THRU -19	0.46 - 0.97
-20 THRU -22	0.51 - 1.07
-23 THRU -27	0.71 - 1.14
-28 THRU -32	0.81 - 1.14
-34 THRU -46	0.86 - 1.63
-47 THRU -50	1.00 - 2.20
-52 THRU -53	0.60 - 1.90
-55 THRU -67	0.80 - 2.00
-68 THRU -82	0.90 - 2.40
-85 THRU -90	1.10 - 2.80
-92 THRU -150	1.30 - 3.30
-155 THRU -200	1.80 - 4.10
-210 THRU -280	2.00 - 4.80

NOTES:

1. MATERIAL: CRES, SEE PROCUREMENT SPECIFICATION.
2. HARDNESS: SEE PROCUREMENT SPECIFICATION.
3. FINISH: PASSIVATED, SEE PROCUREMENT SPECIFICATION.
4. PROCUREMENT SPECIFICATION: MA 4035.
5. SURFACE TEXTURE: ANSI/ASME B46.1-1985. UNLESS OTHERWISE SPECIFIED, SURFACES TO BE 0.8 MICROMETRES Ra. Max.
6. DIMENSIONING AND TOLERANCING: ANSI Y14.5M-1982.
7. DIMENSIONS IN MILLIMETRES.
8. DO NOT USE UNASSIGNED PART NUMBERS.

MA IS SAE PUBLICATION.

ANSI IS AMERICAN NATIONAL STANDARDS INSTITUTE PUBLICATION.

TABLE VI

GROOVE RUNOUT TOLERANCE	
E	NOM. BORE DIA.
0.10	-12 THRU -28
0.15	-29 THRU -55
0.20	-56 THRU -80
0.25	-82 THRU -150
0.30	-155 THRU -280

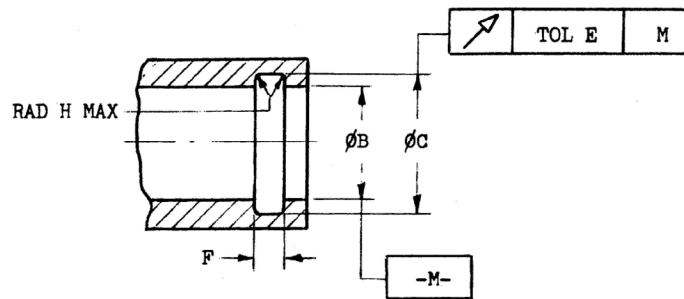


TABLE V. GROOVE DIMENSIONS (FOR REFERENCE ONLY)

NOM BORE DIA B	C	F	H	NOM BORE DIA B	C	F	H
12	12.65 - 12.75	0.70 - 0.85	0.13	61	62.94 - 63.24	1.42 - 1.52	0.25
13	13.70 - 13.80	1.00 - 1.08	0.13	62	63.94 - 64.24	1.42 - 1.52	0.25
14	14.80 - 14.90	1.00 - 1.08	0.13	63	64.94 - 65.24	1.42 - 1.52	0.25
15	15.85 - 15.95	1.00 - 1.08	0.13	64	66.04 - 66.34	1.42 - 1.52	0.25
16	16.90 - 17.00	1.00 - 1.08	0.13	65	67.04 - 67.34	1.42 - 1.52	0.25
17	18.00 - 18.10	1.00 - 1.08	0.13	66	68.04 - 68.34	1.42 - 1.52	0.25
18	19.05 - 19.15	1.00 - 1.08	0.13	67	69.10 - 69.40	1.42 - 1.52	0.25
19	20.10 - 20.25	1.00 - 1.08	0.13	68	70.14 - 70.44	1.42 - 1.52	0.25
20	21.15 - 21.30	1.00 - 1.08	0.13	69	71.14 - 71.44	1.42 - 1.52	0.25
21	22.20 - 22.35	1.00 - 1.08	0.13	70	72.14 - 72.44	1.42 - 1.52	0.25
22	23.30 - 23.45	1.20 - 1.28	0.13	71	73.14 - 73.44	1.42 - 1.52	0.25
23	24.35 - 24.50	1.20 - 1.28	0.13	72	74.24 - 74.54	1.42 - 1.52	0.25
24	25.40 - 25.55	1.20 - 1.28	0.13	75	77.24 - 77.54	1.42 - 1.52	0.25
25	26.60 - 26.75	1.20 - 1.28	0.13	78	80.30 - 80.60	1.73 - 1.86	0.25
26	27.70 - 27.85	1.20 - 1.28	0.25	80	82.34 - 82.64	1.73 - 1.86	0.25
27	28.80 - 28.95	1.40 - 1.50	0.25	82	84.40 - 84.70	1.73 - 1.86	0.25
28	29.80 - 29.95	1.40 - 1.50	0.25	85	87.50 - 87.80	1.73 - 1.86	0.25
29	30.85 - 31.05	1.40 - 1.50	0.25	88	90.54 - 90.84	1.73 - 1.86	0.25
30	31.90 - 32.10	1.40 - 1.50	0.25	90	92.64 - 92.94	1.73 - 1.86	0.25
31	32.95 - 33.15	1.40 - 1.50	0.25	92	94.70 - 95.00	1.73 - 1.86	0.25
32	33.90 - 34.10	1.40 - 1.50	0.25	95	97.70 - 98.00	1.73 - 1.86	0.25
34	36.10 - 36.30	1.40 - 1.50	0.25	98	100.84 - 101.14	1.73 - 1.86	0.25
35	37.20 - 37.40	1.40 - 1.50	0.25	100	102.84 - 103.14	1.73 - 1.86	0.25
36	38.30 - 38.50	1.40 - 1.50	0.25	102	105.00 - 105.30	1.73 - 1.86	0.25
37	39.30 - 39.50	1.40 - 1.50	0.25	105	108.00 - 108.30	1.73 - 1.86	0.25
38	40.40 - 40.60	1.40 - 1.50	0.25	108	111.16 - 111.46	1.73 - 1.86	0.25
40	42.40 - 42.60	1.75 - 1.85	0.25	110	113.16 - 113.46	1.73 - 1.86	0.25
42	44.50 - 44.70	1.75 - 1.85	0.25	112	115.30 - 115.60	1.73 - 1.86	0.25
45	47.60 - 47.80	1.75 - 1.85	0.25	115	118.30 - 118.60	1.73 - 1.86	0.25
46	48.70 - 48.90	1.75 - 1.85	0.25	120	123.40 - 123.70	2.00 - 2.13	0.25
47	49.80 - 50.00	1.75 - 1.85	0.25	125	128.40 - 128.70	2.00 - 2.13	0.25
48	50.90 - 51.10	1.75 - 1.85	0.25	130	133.50 - 133.80	2.00 - 2.13	0.25
50	53.10 - 53.30	1.75 - 1.85	0.25	135	138.44 - 138.80	2.00 - 2.13	0.25
52	53.67 - 53.92	1.42 - 1.52	0.25	140	143.54 - 143.90	2.00 - 2.13	0.25
53	54.67 - 54.92	1.42 - 1.52	0.25	145	148.64 - 149.00	2.00 - 2.13	0.25
55	56.70 - 57.00	1.42 - 1.52	0.25	150	153.64 - 154.00	2.00 - 2.13	0.25
56	57.70 - 58.00	1.42 - 1.52	0.25	155	159.20 - 159.60	2.40 - 2.55	0.25
58	59.70 - 60.00	1.42 - 1.52	0.25	160	164.20 - 164.60	2.40 - 2.55	0.25
59	60.78 - 61.08	1.42 - 1.52	0.25	165	169.20 - 169.60	2.40 - 2.55	0.25
60	61.84 - 62.14	1.42 - 1.52	0.25	170	174.40 - 174.80	2.40 - 2.55	0.25