SAE Aerospace
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AEROSPACE STANDARD

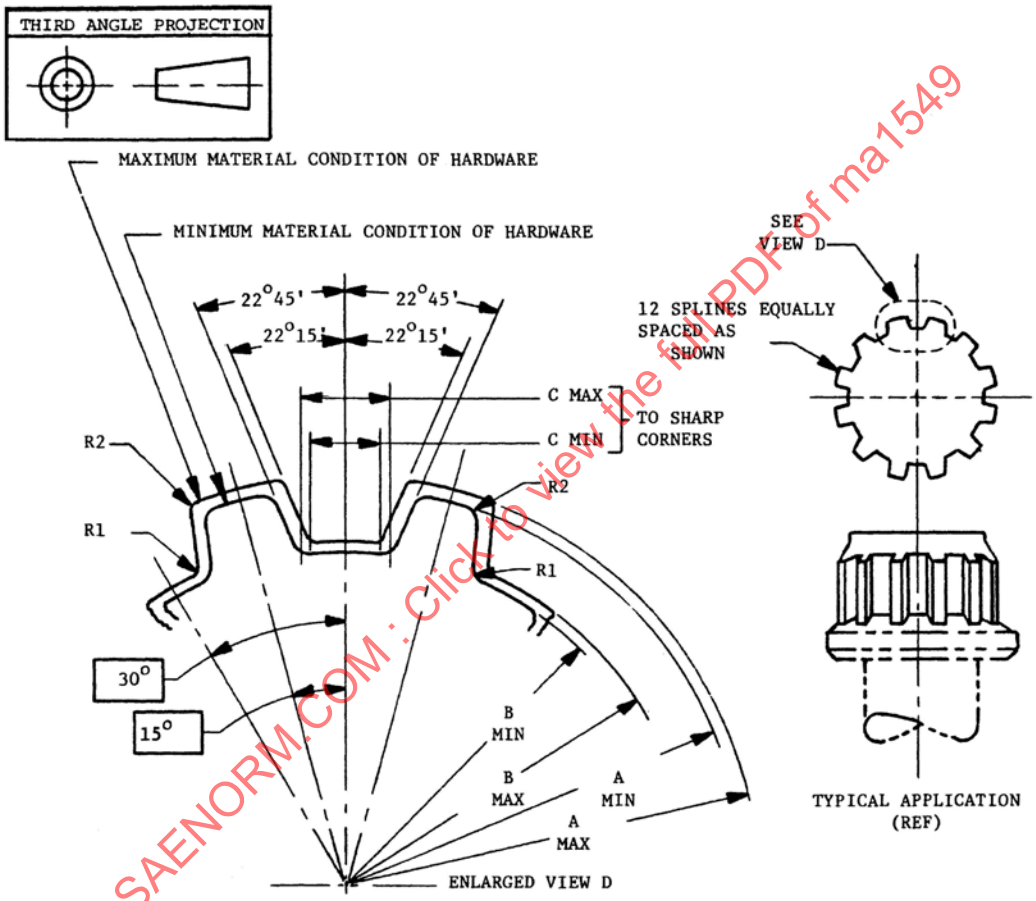
SAE MA1549

Issued 1980-04
Reaffirmed 2012-11

Wrenching Configuration, 12 Spline, For Metric Threaded Fasteners

RATIONALE

MA1549 has been reaffirmed to comply with the SAE five-year review policy.



VARIATIONS IN SIZE, FORM, AND POSITION OF THE 12 SPLINES ARE PERMITTED WITHIN THE WRENCHING LENGTH, PROVIDING THE ACTUAL PROFILE FALLS WITHIN THE MAXIMUM AND MINIMUM MATERIAL CONDITIONS SHOWN.

DIMENSIONS ARE PRIOR TO FORMING OF THE LOCKING ELEMENT ON SELF LOCKING NUTS. LOCKING ELEMENT SHALL NOT PREVENT THE ASSEMBLY OF THE WRENCH (PER MA 1586) ON THE WRENCHING ELEMENT.

REFERENCE ONLY: THIS STANDARD IS IN AGREEMENT WITH ISO DRAFT PROPOSAL ISO/TC20/SC4 DOC. N942 FOR THE 12 SPLINE WRENCHING CONFIGURATION. DIMENSIONING AND TOLERANCING PER ANSI Y14.5-1973.

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TABLE I

MILLIMETRES

DASH NO.	NOMINAL WRENCHING SIZE	MAXIMUM MATERIAL CONDITION					MINIMUM MATERIAL CONDITION				
		A DIA MAX	B DIA MAX	C MIN	R1 MAX	R2 MIN	A DIA MIN	B DIA MIN	C MAX	R1 MIN	R2 MAX
05	5	6.20	5.14	0.53	0.20	0.08	6.02	5.01	0.68	0.08	0.20
06	6	7.38	6.18	0.62	0.20	0.08	7.20	6.03	0.77	0.08	0.20
07	7	8.56	7.23	0.71	0.25	0.13	8.36	7.08	0.86	0.13	0.25
08	8	9.75	8.27	0.80	0.25	0.13	9.54	8.12	0.95	0.13	0.25
09	9	10.93	9.31	0.89	0.25	0.13	10.70	9.16	1.04	0.13	0.25
10	10	12.12	10.36	0.98	0.25	0.13	11.89	10.21	1.13	0.13	0.25
11	11	13.30	11.40	1.07	0.25	0.13	13.07	11.22	1.25	0.13	0.25
12	12	14.48	12.44	1.16	0.38	0.13	14.23	12.27	1.34	0.13	0.38
13	13	15.67	13.49	1.25	0.38	0.13	15.41	13.31	1.43	0.13	0.38
14	14	16.85	14.53	1.34	0.38	0.13	16.57	14.35	1.52	0.13	0.38
15	15	18.03	15.58	1.43	0.38	0.13	17.75	15.40	1.64	0.13	0.38
16	16	19.22	16.62	1.52	0.38	0.13	18.94	16.44	1.73	0.13	0.38
17	17	20.40	17.66	1.61	0.51	0.13	20.12	17.48	1.82	0.13	0.51
18	18	21.58	18.70	1.70	0.51	0.13	21.31	18.50	1.91	0.13	0.51
19	19	22.77	19.75	1.79	0.51	0.13	22.49	19.55	2.00	0.13	0.51
20	20	23.95	20.79	1.88	0.64	0.13	23.67	20.59	2.11	0.13	0.64
21	21	25.13	21.84	1.97	0.64	0.13	24.86	21.63	2.20	0.13	0.64
22	22	26.32	22.88	2.07	0.64	0.13	26.01	22.68	2.29	0.13	0.64
23	23	27.50	23.92	2.16	0.64	0.13	27.20	23.72	2.38	0.13	0.64
24	24	28.69	24.97	2.25	0.64	0.13	28.38	24.76	2.47	0.13	0.64
25	25	29.87	26.01	2.34	0.76	0.25	29.56	25.81	2.56	0.25	0.76
26	26	31.05	27.05	2.43	0.76	0.25	30.75	26.89	2.66	0.25	0.76
27	27	32.24	28.10	2.52	0.76	0.25	31.93	27.89	2.75	0.25	0.76
28	28	33.42	29.14	2.61	0.76	0.25	33.11	28.94	2.84	0.25	0.76
29	29	34.60	30.18	2.70	0.76	0.25	34.30	29.98	2.93	0.25	0.76
30	30	35.79	31.23	2.79	0.89	0.25	35.46	30.97	3.02	0.25	0.89
32	32	38.15	33.31	2.97	0.89	0.25	37.82	33.06	3.20	0.25	0.89
34	34	40.52	35.40	3.15	0.89	0.25	40.19	35.15	3.38	0.25	0.89
36	36	42.89	37.49	3.33	1.02	0.25	42.56	37.23	3.56	0.25	1.02
38	38	45.26	39.57	3.51	1.02	0.25	44.93	39.32	3.74	0.25	1.02