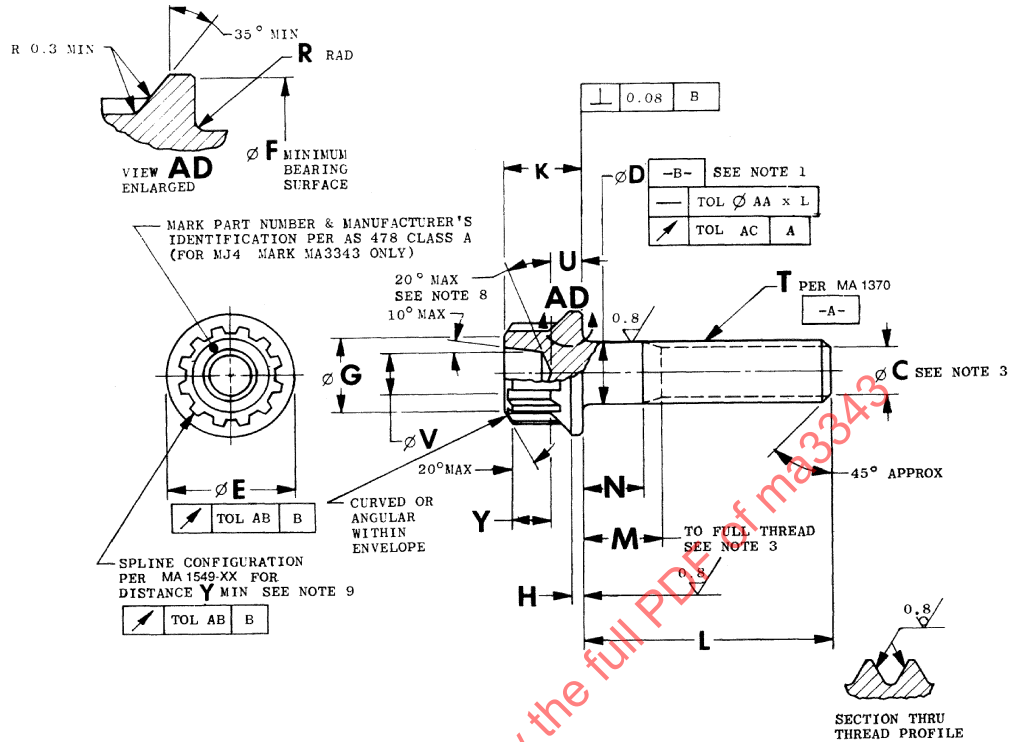


MA3343

FEDERAL SUPPLY CLASS
5306

RATIONALE

MA3343 HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

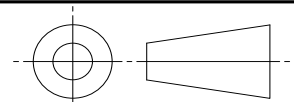


1. FOR PART NUMBERS WHERE DIMENSION **N** IS EQUAL OR LESS THAN ONE DIAMETER TO THE HEAD, THE THREAD PD SHALL REPLACE DATUM **B**
2. MATERIAL: CORROSION AND HEAT RESISTANT NICKEL BASE ALLOY AMS 5662 (UNS N07718)
3. PROCUREMENT SPECIFICATION: MA3377
4. HARDNESS: 40-46 HRC OR EQUIVALENT.
5. FLUORESCENT PENETRANT INSPECTION: AMS 2645 . ACCEPTANCE CRITERIA PER MA3377
6. SURFACE TEXTURE: SYMBOLS PER ANSI Y14.36-1978; REQUIREMENTS PER ANSI/ASME B46.1-1985, UNLESS OTHERWISE SPECIFIED SURFACES TO BE 3.2 MICROMETRES. Ra.
7. PART NUMBER SHALL INCLUDE THE STANDARD NUMBER AND THE DASH NUMBER TO INDICATE DIAMETER AND LENGTH. EXAMPLE OF PART NUMBER:
MA3343-040024 = BOLT, MJ4X0.7 THREAD, 24 LONG.
MA3343-120116 = BOLT, MJ12X1.25 THREAD, 116 LONG
8. SHAPE OF BOTTOM OF HOLE MAY BE FLAT OR CURVED WITHIN DIMENSIONS SHOWN. NO HOLE IS REQUIRED ON DIAMETER 4.
9. WRENCHING CONFIGURATION SHALL BE IN ACCORDANCE WITH MA1549 FOR THE APPLICABLE DASH NO. SEE TABLE 1
10. BREAK EDGES 0.1-0.4, UNLESS OTHERWISE SPECIFIED.
11. DIMENSIONING AND TOLERANCING: ANSI Y14.5M-1982. TOLERANCE GRADES PER ANSI B4.2-1978.
12. ALL DIMENSIONS IN SI MILLIMETRES UNLESS OTHERWISE SPECIFIED.
13. DO NOT USE UNASSIGNED PART NUMBERS.

MA, AS AND AMS ARE SAE PUBLICATIONS.
ANSI IS AMERICAN NATIONAL STANDARDS INSTITUTE PUBLICATIONS.

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/MA3343>

THIRD ANGLE PROJECTION



CUSTODIAN: E-25



METRIC AEROSPACE STANDARD

BOLT, MACHINE - SPLINE DRIVE EXTENDED WASHER,
FULL SHANK, LONG THREAD, AMS 5662, METRIC

MA3343
SHEET 1 OF 5

TABLE I

PART NUMBER SEE NOTE 7	NOM DIA REF	THREAD T	C	K h15	E MAX	F MIN	G MIN	H MIN
MA3343-040XXX	4	MJ4x0.7-4h6h	2.5-3.0	5.02-5.50	8.3	7.5	6	0.8
MA3343-050XXX	5	MJ5x0.8-4h6h	2.9-3.9	5.92-6.50	9.1	8.3	7	1.0
MA3343-060XXX	6	MJ6x1-4h6h	3.7-4.7	6.92-7.50	10.6	9.8	8	1.2
MA3343-070XXX	7	MJ7x1-4h6h	4.7-5.7	7.62-8.20	12.1	11.3	9	1.4
MA3343-080XXX	8	MJ8x1-4h6h	5.7-6.7	8.02-8.60	13.6	12.8	10	1.6
MA3343-100XXX	10	MJ10x1.25-4h6h	7.4-8.4	9.40-10.10	16.7	15.7	12	2.0
MA3343-120XXX	12	MJ12x1.25-4h6h	9.3-10.3	10.70-11.40	19.9	18.8	14	2.4

TABLE I

NOM DIA REF	D h12	R	U	V	Y MIN	AA	AB	AC	WRENCHING CONFIGURATION DASH NO SEE NOTE 9
4	3.88-4.00	0.2-0.4	2.5-2.9	3.2-3.7	2.5	0.0030	0.10	0.12	06
5	4.88-5.00	0.3-0.5	2.5-2.9	3.2-3.7	2.8	0.0030	0.13	0.12	07
6	5.88-6.00	0.5-0.7	2.8-3.2	4.1-4.6	3.5	0.0030	0.15	0.12	08
7	6.85-7.00	0.5-0.7	3.3-3.7	4.9-5.4	3.8	0.0030	0.18	0.15	09
8	7.85-8.00	0.5-0.7	3.7-4.1	5.2-5.7	3.9	0.0030	0.20	0.15	10
10	9.85-10.00	0.6-0.8	4.7-5.1	6.7-7.2	4.2	0.0025	0.25	0.15	12
12	11.82-12.00	0.6-0.9	5.6-6.0	8.0-8.5	4.5	0.0025	0.30	0.18	14

TABLE II

L LENGTH	MJ4x0.7-4h6h				MJ5x0.8-4h6h			
	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100
17.7-18.3	040018	4.0	1.1	0.360	—	—	—	—
19.7-20.3	040020	6.0	3.1	0.379	050020	4.0	0.9	0.572
21.7-22.3	040022	8.0	5.1	0.398	050022	6.0	2.9	0.604
23.7-24.3	040024	10.0	7.1	0.417	050024	8.0	4.9	0.636
25.7-26.3	040026	12.0	9.1	0.436	050026	10.0	6.9	0.668
27.7-28.3	040028	14.0	11.1	0.455	050028	12.0	8.9	0.700
29.7-30.3	040030	16.0	13.1	0.474	050030	14.0	10.9	0.732
31.7-32.3	040032	18.0	15.1	0.493	050032	16.0	12.9	0.764
33.7-34.3	040034	20.0	17.1	0.512	050034	18.0	14.9	0.796
35.7-36.3	040036	22.0	19.1	0.531	050036	20.0	16.9	0.828
37.7-38.3	040038	24.0	21.1	0.550	050038	22.0	18.9	0.860
39.7-40.3	040040	26.0	23.1	0.569	050040	24.0	20.9	0.892
41.7-42.3	040042	28.0	25.1	0.588	050042	26.0	22.9	0.924
43.7-44.3	040044	30.0	27.1	0.607	050044	28.0	24.9	0.956
45.7-46.3	040046	32.0	29.1	0.626	050046	30.0	26.9	0.988
47.7-48.3	040048	34.0	31.1	0.645	050048	32.0	28.9	1.020
49.7-50.3	040050	36.0	33.1	0.664	050050	34.0	30.9	1.052
51.7-52.3	040052	38.0	35.1	0.683	050052	36.0	32.9	1.084
53.7-54.3	040054	40.0	37.1	0.702	050054	38.0	34.9	1.116
55.7-56.3	040056	42.0	39.1	0.721	050056	40.0	36.9	1.148
57.7-58.3	—	—	—	—	050058	42.0	38.9	1.180
59.7-60.3	—	—	—	—	050060	44.0	40.9	1.212
63.7-64.3	—	—	—	—	050064	48.0	44.9	1.276
67.7-68.3	—	—	—	—	050068	52.0	48.9	1.340

TABLE II (CONTINUED)

L LENGTH	MJ6x1-4h6h				MJ7x1-4h6h			
	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100
21.7-22.3	060022	4.0	0.7	0.879	—	—	—	—
23.7-24.3	060024	6.0	2.5	0.925	070024	4.0	0.7	1.269
25.7-26.3	060026	8.0	4.5	0.971	070026	6.0	2.5	1.332
27.7-28.3	060028	10.0	6.5	1.017	070028	8.0	4.5	1.395
29.7-30.3	060030	12.0	8.5	1.063	070030	10.0	6.5	1.458
31.7-32.3	060032	14.0	10.5	1.109	070032	12.0	8.5	1.522
33.7-34.3	060034	16.0	12.5	1.155	070034	14.0	10.5	1.585
35.7-36.3	060036	18.0	14.5	1.201	070036	16.0	12.5	1.648
37.7-38.3	060038	20.0	16.5	1.247	070038	18.0	14.5	1.711
39.7-40.3	060040	22.0	18.5	1.293	070040	20.0	16.5	1.774
41.7-42.3	060042	24.0	20.5	1.339	070042	22.0	18.5	1.837
43.7-44.3	060044	26.0	22.5	1.385	070044	24.0	20.5	1.900
45.7-46.3	060046	28.0	24.5	1.431	070046	26.0	22.5	1.963
47.7-48.3	060048	30.0	26.5	1.477	070048	28.0	24.5	2.026
49.7-50.3	060050	32.0	28.5	1.523	070050	30.0	26.5	2.089
51.7-52.3	060052	34.0	30.5	1.569	070052	32.0	28.5	2.152
53.7-54.3	060054	36.0	32.5	1.615	070054	34.0	30.5	2.215
55.7-56.3	060056	38.0	34.5	1.661	070056	36.0	32.5	2.278
57.7-58.3	060058	40.0	36.5	1.707	070058	38.0	34.5	2.341
59.7-60.3	060060	42.0	38.5	1.753	070060	40.0	36.5	2.404
63.7-64.3	060064	46.0	42.5	1.845	070064	44.0	40.5	2.530
67.7-68.3	060068	50.0	46.5	1.937	070068	48.0	44.5	2.656
71.7-72.3	060072	54.0	50.5	2.029	070072	52.0	48.5	2.782
75.7-76.3	060076	58.0	54.5	2.121	070076	56.0	52.5	2.908
79.7-80.3	060080	62.0	58.5	2.213	070080	60.0	56.5	3.034
83.7-84.3	060084	66.0	62.5	2.305	070084	64.0	60.5	3.160
87.7-88.3	—	—	—	—	070088	68.0	64.5	3.286
91.7-92.3	—	—	—	—	070092	72.0	68.5	3.412
95.7-96.3	—	—	—	—	070096	76.0	72.5	3.538



METRIC AEROSPACE STANDARD

BOLT, MACHINE - SPLINE DRIVE EXTENDED WASHER,
FULL SHANK, LONG THREAD, AMS 5662, METRICMA3343
SHEET 3 OF 5

TABLE II (CONTINUED)

L LENGTH	MJ8x1-4h6h				MJ10x1.25-4h6h			
	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100	DASH NO SEE NOTE 7	M MAX	N MIN	APPROX MASS kg/100
25.7-26.3	080026	4.0	0.7	1.782	—	—	—	—
27.7-28.3	080028	6.0	2.5	1.864	—	—	—	—
29.7-30.3	080030	8.0	4.5	1.946	—	—	—	—
31.7-32.3	080032	10.0	6.5	2.028	100032	6.0	2.0	3.286
33.7-34.3	080034	12.0	8.5	2.111	100034	8.0	4.0	3.415
35.7-36.3	080036	14.0	10.5	2.192	100036	10.0	6.0	3.544
37.7-38.3	080038	16.0	12.5	2.274	100038	12.0	8.0	3.673
39.7-40.3	080040	18.0	14.5	2.356	100040	14.0	10.0	3.802
41.7-42.3	080042	20.0	16.5	2.438	100042	16.0	12.0	3.931
43.7-44.3	080044	22.0	18.5	2.520	100044	18.0	14.0	4.060
45.7-46.3	080046	24.0	20.5	2.602	100046	20.0	16.0	4.189
47.7-48.3	080048	26.0	22.5	2.684	100048	22.0	18.0	4.318
49.7-50.3	080050	28.0	24.5	2.766	100050	24.0	20.0	4.447
51.7-52.3	080052	30.0	26.5	2.848	100052	26.0	22.0	4.576
53.7-54.3	080054	32.0	28.5	2.930	100054	28.0	24.0	4.705
55.7-56.3	080056	34.0	30.5	3.012	100056	30.0	26.0	4.834
57.7-58.3	080058	36.0	32.5	3.094	100058	32.0	28.0	4.963
59.7-60.3	080060	38.0	34.5	3.176	100060	34.0	30.0	5.092
63.7-64.3	080064	42.0	38.5	3.340	100064	38.0	34.0	5.350
67.7-68.3	080068	46.0	42.5	3.504	100068	42.0	38.0	5.608
71.7-72.3	080072	50.0	46.5	3.668	100072	46.0	42.0	5.866
75.7-76.3	080076	54.0	50.5	3.832	100076	50.0	46.0	6.124
79.7-80.3	080080	58.0	54.5	3.996	100080	54.0	50.0	6.382
83.7-84.3	080084	62.0	58.5	4.160	100084	58.0	54.0	6.640
87.7-88.3	080088	66.0	62.5	4.324	100088	62.0	58.0	6.898
91.7-92.3	080092	70.0	66.5	4.488	100092	66.0	62.0	7.156
95.7-96.3	080096	74.0	70.5	4.652	100096	70.0	66.0	7.414
99.7-100.3	080100	78.0	74.5	4.816	100100	74.0	70.0	7.672
103.7-104.3	080104	82.0	78.5	4.980	100104	78.0	74.0	7.930
107.7-108.3	080108	86.0	82.5	5.144	100108	82.0	78.0	8.188
111.7-112.3	080112	90.0	86.5	5.308	100112	86.0	82.0	8.446
115.7-116.3					100116	90.0	86.0	8.704
119.7-120.3					100120	94.0	90.0	8.962
123.7-124.3					100124	98.0	94.0	9.220
127.7-128.3					100128	102.0	98.0	9.478
131.7-132.3					100132	106.0	102.0	9.736
135.7-136.3					100136	110.0	106.0	9.994
139.7-140.3					100140	114.0	110.0	10.252