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REV.
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MA3368™

FEDERAL SUPPLY CLASS
5306

RATIONALE

FIGURE 1 REDRAWN, DELETE INSIDE RADII AT TRANSITION OF WRENCH ELEMENT AND BASE FLANGE, IDENTIFY DIM P AS BASIC, UPDATE Y14.5M FORMATS, ADD DATUM DD, ADD EDGE DISTANCE EXCEPTION FOR HEAD MARKING, ADD NEW NOTE FOR DISPOSITION OF EXISTING INVENTORY, REVISE FPI REFERENCE, TABLES RETYPED AND REFORMATTED, GENERAL EDITORIAL REVISIONS THROUGHOUT.

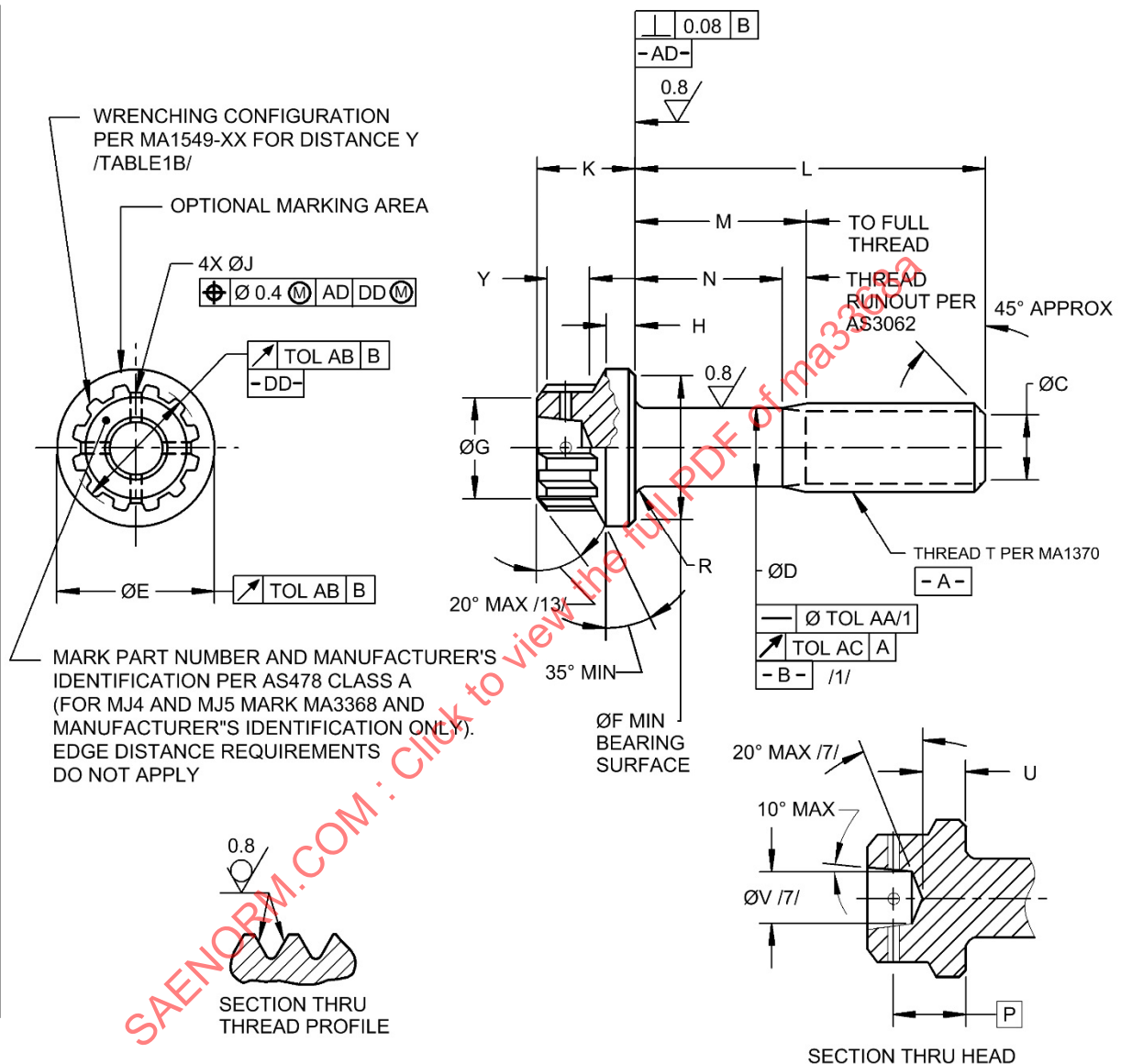


FIGURE 1 - BOLT

For more information on this standard, visit
<https://www.sae.org/standards/content/MA3368A/>

CUSTODIAN: E-25

PROCUREMENT SPECIFICATION: MA3377



METRIC AEROSPACE STANDARD

BOLT, MACHINE-SPLINE EXTENDED WASHER, PD
SHANK, LONG THREAD, DRILLED,
NICKEL ALLOY (UNS N07718), METRIC

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NOTES:

- /1/ FOR PART NUMBERS WHERE DIMENSION N IS EQUAL TO OR LESS THAN ONE TIMES THE NOMINAL DIAMETER OF THE THREAD, DATUM A (THREAD PD) SHALL REPLACE DATUM B.
2. MATERIAL: CORROSION AND HEAT RESISTANT NICKEL ALLOY AMS5662. (COMPOSITION SIMILAR TO UNS N07718).
3. PROCUREMENT SPECIFICATION: MA3377.
4. FLUORESCENT PENETRANT INSPECTION PER ASTM E1417/E1417M. ACCEPTANCE CRITERIA PER MA3377.
5. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, SURFACES TO BE 3.2 MICROINCHES Ra.
- /6/ PART NUMBER SHALL INCLUDE THE STANDARD NUMBER AND THE DASH NUMBER TO INDICATE DIAMETER AND LENGTH. EXAMPLE OF PART NUMBER:

MA3368-040020 = BOLT MJ4X0.7 THREAD 20 MM LONG
MA3368-120104 = BOLT MJ12X1.25 THREAD 104 MM LONG
- /7/ SHAPE OF BOTTOM OF HOLE MAY BE FLAT OR CURVED WITHIN DIMENSIONS SHOWN. NO HOLE IS REQUIRED ON DIAMETER MJ4.
8. BREAK EDGES 0.1 TO 0.4, UNLESS OTHERWISE SPECIFIED.
10. DIMENSIONING AND TOLERANCING: ANSI Y14.5M-1982 (ASME PUBLICATION), TOLERANCE GRADE PER ANSI B4.2-1978 (ASME PUBLICATION).
11. ALL DIMENSIONS ARE IN SI MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
12. DO NOT USE UNASSIGNED PART NUMBERS.
- /13/ CURVED OR ANGULAR WITHIN ENVELOPE.
14. UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
15. REVISION INDICATOR: A CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

MA, AS, AND AMS ARE SAE INTERNATIONAL PUBLICATIONS.

ASME IS AN ASME INTERNATIONAL PUBLICATION.

ASTM IS AN ASTM INTERNATIONAL PUBLICATION.

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	BOLT, MACHINE-SPLINE EXTENDED WASHER, PD SHANK, LONG THREAD, DRILLED, NICKEL ALLOY (UNS N07718), METRIC		

TABLE 1A - PART NUMBERS, NOM DIA, THREAD T, AND DIMENSIONS ØC, D, ØE, ØF, ØG, H, AND ØJ

PART NUMBER /6/	NOM DIA	THREAD T	ØC	ØD h15	ØE MAX	ØF MIN	ØG MIN	H MIN	ØJ h13
MA3368-040XXX	4	MJ4X0.7-4h6h	2.6- 3.1	3.42- 3.68	8.3	7.5	6	0.8	1.00-1.14
MA3368-050XXX	5	MJ5X0.8-4h6h	3.0- 4.0	4.35- 4.61	9.1	8.3	7	1.0	1.00-1.14
MA3368-060XXX	6	MJ6X1-4h6h	3.7- 4.7	5.22- 5.48	10.6	9.8	8	1.2	1.40-1.54
MA3368-070XXX	7	MJ7X1-4h6h	4.7- 5.7	6.22- 6.48	12.1	11.3	9	1.4	1.40-1.54
MA3368-080XXX	8	MJ8X1-4h6h	5.7- 6.7	7.22- 7.48	13.6	12.8	10	1.6	1.40-1.54
MA3368-100XXX	10	MJ10X1.25-4h6h	7.4- 8.4	9.06- 9.32	16.7	15.7	12	2.0	1.60-1.74
MA3368-120XXX	12	MJ12X1.25-4h6h	9.4-10.4	11.06-11.32	19.8	18.8	14	2.4	1.60-1.74

TABLE 1B - PART NUMBERS AND DIMENSIONS ØK, P, R, U, ØV, Y, AA, AB, AC, AND SPLINE DASH NO.

PART NUMBER /6/	ØK h15	P BASIC	R RAD	U	ØV	Y MIN	AA TOL	AB TOL	AC TOL	SPLINE MA1549 DASH NO.
MA3368-040XXX	5.02-5.50	3.5	0.2-0.4	-----	-----	2.5	0.0030	0.10	0.12	06
MA3368-050XXX	5.92-6.50	4.5	0.3-0.5	2.5-2.9	3.2-3.7	2.8	0.0030	0.13	0.12	07
MA3368-060XXX	6.92-7.50	5.2	0.5-0.7	2.8-3.2	4.1-4.6	3.5	0.0030	0.15	0.12	08
MA3368-070XXX	7.62-8.20	5.9	0.5-0.7	3.3-3.7	4.9-5.4	3.8	0.0030	0.18	0.15	09
MA3368-080XXX	8.02-8.60	6.3	0.5-0.7	3.7-4.1	5.2-5.7	3.9	0.0030	0.20	0.15	10
MA3368-100XXX	9.40-10.10	7.7	0.6-0.8	4.7-5.1	6.7-7.2	4.2	0.0025	0.25	0.15	12
MA3368-120XXX	10.70-11.40	8.8	0.6-0.9	5.6-6.0	8.0-8.5	4.5	0.0025	0.30	0.18	14



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TABLE 2 - DASH NO., DIMENSIONS L, M, N, AND APPROX. MASS

SIZE	DASH NO. /6/	L	M MAX	N MIN	APPROX MASS kg/100
MJ4X0.7-4h6h	040006	5.7- 6.3	1.8	0.4	0.232
	040008	7.7- 8.3	1.8	0.4	0.248
	040010	9.7-10.3	1.8	0.4	0.264
	040012	11.7-12.3	1.8	0.4	0.280
	040014	13.7-14.3	1.8	0.4	0.296
	040016	15.7-16.3	2.0	0.4	0.312
	040018	17.7-18.3	4.0	1.1	0.328
	040020	19.7-20.3	6.0	3.1	0.344
	040022	21.7-22.3	8.0	5.1	0.360
	040024	23.7-24.3	10.0	7.1	0.376
	040026	25.7-26.3	12.0	9.1	0.392
	040028	27.7-28.3	14.0	11.1	0.408
	040030	29.7-30.3	16.0	13.1	0.424
	040032	31.7-32.3	18.0	15.1	0.439
	040034	33.7-34.3	20.0	17.1	0.455
	040036	35.7-36.3	22.0	19.1	0.471
	040038	37.7-38.3	24.0	21.1	0.487
	040040	39.7-40.3	26.0	23.1	0.503
	040042	41.7-42.3	28.0	25.1	0.519
	040044	43.7-44.3	30.0	27.1	0.535
	040046	45.7-46.3	32.0	29.1	0.551
	040048	47.7-48.3	34.0	31.1	0.566
	040050	49.7-50.3	36.0	33.1	0.582
	040052	51.7-52.3	38.0	35.1	0.592
	040054	53.7-54.3	40.0	37.1	0.614
	040056	55.7-56.3	42.0	39.1	0.630



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TABLE 2 - DASH NO., DIMENSIONS L, M, N, AND APPROX. MASS (CONTINUED)

SIZE	DASH NO. /6/	L	M MAX	N MIN	APPROX MASS kg/100
MJ5X0.8-4h6h	050008	7.7- 8.3	2.1	0.5	0.366
	050010	9.7-10.3	2.1	0.5	0.392
	050012	11.7-12.3	2.1	0.5	0.418
	050014	13.7-14.3	2.1	0.5	0.443
	050016	15.7-16.3	2.1	0.5	0.469
	050018	17.7-18.3	2.1	0.5	0.495
	050020	19.7-20.3	4.0	0.9	0.520
	050022	21.7-22.3	6.0	2.9	0.546
	050024	23.7-24.3	8.0	4.9	0.571
	050026	25.7-26.3	10.0	6.9	0.596
	050028	27.7-28.3	12.0	8.9	0.622
	050030	29.7-30.3	14.0	10.9	0.647
	050032	31.7-32.3	16.0	12.9	0.673
	050034	33.7-34.3	18.0	14.9	0.698
	050036	35.7-36.3	20.0	16.9	0.724
	050038	37.7-38.3	22.0	18.9	0.749
	050040	39.7-40.3	24.0	20.9	0.774
	050042	41.7-42.3	26.0	22.9	0.800
	050044	43.7-44.3	28.0	24.9	0.825
	050046	45.7-46.3	30.0	26.9	0.850
	050048	47.7-48.3	32.0	28.9	0.876
	050050	49.7-50.3	34.0	30.9	0.901
	050052	51.7-52.3	36.0	32.9	0.927
	050054	53.7-54.3	38.0	34.9	0.952
	050056	55.7-56.3	40.0	36.9	0.978
	050058	57.7-58.3	42.0	38.9	1.003
	050060	59.7-60.3	44.0	40.9	1.028
	050064	63.7-64.3	48.0	44.9	1.079
	050068	67.7-68.3	52.0	48.9	1.130



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TABLE 2 - DASH NO., DIMENSIONS L, M, N, AND APPROX. MASS (CONTINUED)

SIZE	DASH NO. /6/	L	M MAX	N MIN	APPROX MASS kg/100
MJ6X1-4h6h	060010	9.7-10.3	2.7	0.7	0.570
	060012	11.7-12.3	2.7	0.7	0.606
	060014	13.7-14.3	2.7	0.7	0.643
	060016	15.7-16.3	2.7	0.7	0.679
	060018	17.7-18.3	2.7	0.7	0.716
	060020	19.7-20.3	2.7	0.7	0.753
	060022	21.7-22.3	4.0	0.7	0.789
	060024	23.7-24.3	6.0	2.5	0.826
	060026	25.7-26.3	8.0	4.5	0.862
	060028	27.7-28.3	10.0	6.5	0.898
	060030	29.7-30.3	12.0	8.5	0.935
	060032	31.7-32.3	14.0	10.5	0.971
	060034	33.7-34.3	16.0	12.5	1.007
	060036	35.7-36.3	18.0	14.5	1.044
	060038	37.7-38.3	20.0	16.5	1.080
	060040	39.7-40.3	22.0	18.5	1.116
	060042	41.7-42.3	24.0	20.5	1.152
	060044	43.7-44.3	26.0	22.5	1.189
	060046	45.7-46.3	28.0	24.5	1.225
	060048	47.7-48.3	30.0	26.5	1.261
	060050	49.7-50.3	32.0	28.5	1.298
	060052	51.7-52.3	34.0	30.5	1.334
	060054	53.7-54.3	36.0	32.5	1.379
	060056	55.7-56.3	38.0	34.5	1.406
	060058	57.7-58.3	40.0	36.5	1.443
	060060	59.7-60.3	42.0	38.5	1.479
	060064	63.7-64.3	46.0	42.5	1.552
	060068	67.7-68.3	50.0	46.5	1.624
	060072	71.7-72.3	54.0	50.5	1.697
	060076	75.7-76.3	58.0	54.5	1.770
	060080	79.7-80.3	62.0	58.5	1.842
	060084	83.7-84.3	66.0	62.5	1.915



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TABLE 2 - DASH NO., DIMENSIONS L, M, N, AND APPROX. MASS (CONTINUED)

SIZE	DASH NO. /6/	L	M MAX	N MIN	APPROX MASS kg/100
MJ7X1-4h6h	070010	9.7-10.3	2.7	0.7	0.793
	070012	11.7-12.3	2.7	0.7	0.845
	070014	13.7-14.3	2.7	0.7	0.896
	070016	15.7-16.3	2.7	0.7	0.948
	070018	17.7-18.3	2.7	0.7	1.000
	070020	19.7-20.3	2.7	0.7	1.052
	070022	21.7-22.3	2.7	0.7	1.103
	070024	23.7-24.3	4.0	0.7	1.155
	070026	25.7-26.3	6.0	2.5	1.206
	070028	27.7-28.3	8.0	4.5	1.257
	070030	29.7-30.3	10.0	6.5	1.308
	070032	31.7-32.3	12.0	8.5	1.360
	070034	33.7-34.3	14.0	10.5	1.411
	070036	35.7-36.3	16.0	12.5	1.462
	070038	37.7-38.3	18.0	14.5	1.513
	070040	39.7-40.3	20.0	16.5	1.565
	070042	41.7-42.3	22.0	18.5	1.616
	070044	43.7-44.3	24.0	20.5	1.668
	070046	45.7-46.3	26.0	22.5	1.718
	070048	47.7-48.3	28.0	24.5	1.770
	070050	49.7-50.3	30.0	26.5	1.821
	070052	51.7-52.3	32.0	28.5	1.872
	070054	53.7-54.3	34.0	30.5	1.923
	070056	55.7-56.3	36.0	32.5	1.974
	070058	57.7-58.3	38.0	34.5	2.026
	070060	59.7-60.3	40.0	36.5	2.077
	070064	63.7-64.3	44.0	40.5	2.179
	070068	67.7-68.3	48.0	44.5	2.282
	070072	71.7-72.3	52.0	48.5	2.384
	070076	75.7-76.3	56.0	52.5	2.487
	070080	79.7-80.3	60.0	56.5	2.589
	070084	83.7-84.3	64.0	60.5	2.692
	070088	87.7-88.3	68.0	64.5	2.794
	070092	91.7-92.3	72.0	68.5	2.896
	070096	95.7-96.3	76.0	72.5	2.999



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TABLE 2 - DASH NO., DIMENSIONS L, M, N, AND APPROX. MASS (CONTINUED)

SIZE	DASH NO. /6/	L	M MAX	N MIN	APPROX MASS kg/100
MJ8X1-4h6h	080010	9.7- 10.3	2.7	0.7	1.071
	080012	11.7- 12.3	2.7	0.7	1.140
	080014	13.7- 14.3	2.7	0.7	1.210
	080016	15.7- 16.3	2.7	0.7	1.279
	080018	17.7- 18.3	2.7	0.7	1.348
	080020	19.7- 20.3	2.7	0.7	1.417
	080022	21.7- 22.3	2.7	0.7	1.486
	080024	23.7- 24.3	2.7	0.7	1.556
	080026	25.7- 26.3	4.0	0.7	1.625
	080028	27.7- 28.3	6.0	2.5	1.694
	080030	29.7- 30.3	8.0	4.5	1.762
	080032	31.7- 32.3	10.0	6.5	1.831
	080034	33.7- 34.3	12.0	8.5	1.900
	080036	35.7- 36.3	14.0	10.5	1.968
	080038	37.7- 38.3	16.0	12.5	2.037
	080040	39.7- 40.3	18.0	14.5	2.106
	080042	41.7- 42.3	20.0	16.5	2.175
	080044	43.7- 44.3	22.0	18.5	2.243
	080046	45.7- 46.3	24.0	20.5	2.312
	080048	47.7- 48.3	26.0	22.5	2.381
	080050	49.7- 50.3	28.0	24.5	2.450
	080052	51.7- 52.3	30.0	26.5	2.518
	080054	53.7- 54.3	32.0	28.5	2.587
	080056	55.7- 56.3	34.0	30.5	2.656
	080058	57.7- 58.3	36.0	32.5	2.724
	080060	59.7- 60.3	38.0	34.5	2.793
	080064	63.7- 64.3	42.0	38.5	2.931
	080068	67.7- 68.3	46.0	42.5	3.068
	080072	71.7- 72.3	50.0	46.5	3.206
	080076	75.7- 76.3	54.0	50.5	3.343
	080080	79.7- 80.3	58.0	54.5	3.480
	080084	83.7- 84.3	62.0	58.5	3.618
	080088	87.7- 88.3	66.0	62.5	3.755
	080092	91.7- 92.3	70.0	66.5	3.893
	080096	95.7- 96.3	74.0	70.5	4.030
	080100	99.7-100.3	78.0	74.5	4.168
	080104	103.7-104.3	82.0	78.5	4.305
	080108	107.7-108.3	86.0	82.5	4.443
	080112	111.7-112.3	90.0	86.5	4.580



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