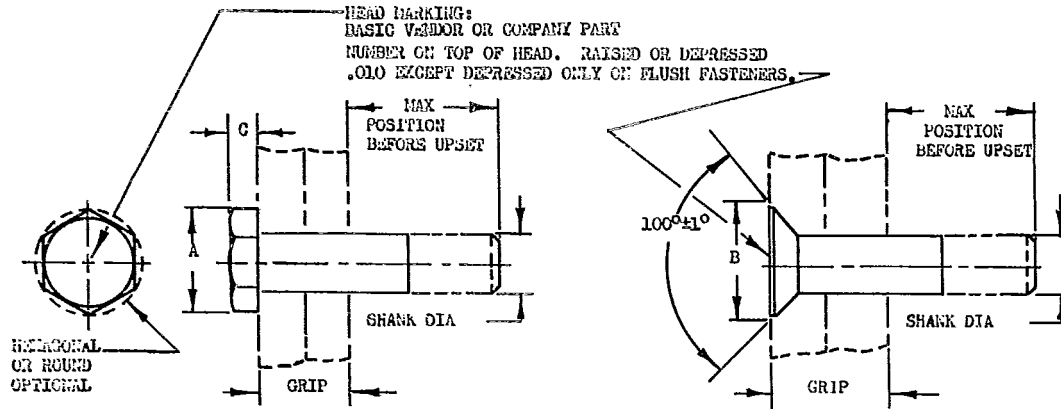


NATIONAL AEROSPACE STANDARD

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC., 1725 DE SALES STREET, N. W., WASHINGTON, D. C. 20036

IN FORMULATING AND APPROVING NAS STANDARDS, AIA AND ITS COMMITTEES WILL NOT INVESTIGATE OR GUARANTEE THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR PROTECTING THEMSELVES AGAINST LIABILITY FOR INFRINGEMENT OF PATENTS.

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME PRODUCT, AND SHALL BECOME EFFECTIVE FOR VENDOR MARKING ACTUALLY NOT LATER THAN 6 MONTHS AFTER THE LATEST DATE OF APPROVAL SHOWN.



NOMINAL DIA	SHANK DIA	MAX POSITION BEFORE UPSET	DIM A MAX (STL)	DIM A MAX (AL)	DIMENSION B (SHARP)	G MAX	Z (a)
#8 (.164)	.1645 .1635	.35	.288	.330	.332 .325	.096	.0040
#10 (.190)	.1895 .1885	.44	.360	.400	.385 .378	.113	.0040
1/4 (.250)	.2495 .2485	.55	.435	.545	.507 .499	.135	.0030
5/16 (.3125)	.3120 .3110	.70	.503		.635 .626	.160	.0030
3/8 (.375)	.3745 .3735	.90	.580		.762 .752	.185	.0025
7/16 (.4375)	.4370 .4360	1.10	.650		.890 .880	.212	.0025
1/2 (.500)	.4995 .4985	1.30	.720		1.017 1.007	.239	.0020

(a) SHANK STRAIGHTNESS: WITHIN "Z" VALUES TIR PER INCH OF LENGTH.

DASH NO.	GRIP MIN	RANGE MAX
2	.062	.125
3	.125	.187
4	.187	.250
5	.250	.312
6	.312	.375
7	.375	.437
8	.437	.500
9	.500	.562
10	.562	.625
11	.625	.687
12	.687	.750
13	.750	.812
14	.812	.875
15	.875	.937
16	.937	1.000

DASH NO.	GRIP MIN	RANGE MAX
17	1.000	1.062
18	1.062	1.125
19	1.125	1.187
20	1.187	1.250
21	1.250	1.312
22	1.312	1.375
23	1.375	1.437
24	1.437	1.500
25	1.500	1.562
26	1.562	1.625
27	1.625	1.687
28	1.687	1.750
29	1.750	1.812
30	1.812	1.875
31	1.875	1.937
32	1.937	2.000

Inactive For New Design
After 30 June 1981, No
Superseding Standard.

THE BEARING SURFACE SHALL BE CONCENTRIC WITH THE SHANK WITHIN A TOLERANCE OF 3% OF THE WIDTH ACROSS THE DIAMETER OF ROUND HEADS AND ACROSS THE CORNER OF A HEXAGONAL HEAD. UNLESS OTHERWISE SPECIFIED THE BEARING SURFACE OF THE HEAD OF FLUSH FASTENERS SHALL BE CONCENTRIC WITH THE SHANK WITHIN .003 INCHES FULL INDICATOR READING.

THE BEARING SURFACE OF PROTRUDING FASTENERS SHALL BE AT RIGHT ANGLES TO THE SHANK WITHIN TWO DEGREES FOR FASTENERS ONE-HALF INCH IN DIAMETER AND LESS, AND WITHIN ONE DEGREE FOR FASTENERS LARGER THAN ONE-HALF INCH IN DIAMETER.

DIMENSION IN INCHES, TO BE MET AFTER PLATING.

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2	3

CUSTODIAN: NATIONAL AEROSPACE STANDARDS COMMITTEE

PROCUREMENT
SPECIFICATION
NAS 1058

TITLE

FASTENER-BLIND, HIGH STRENGTH

CLASSIFICATION
DESIGN STANDARD

NAS 1059

SHEET 1 OF 2

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REVISION (1) 16 JUNE 1958 (2) 28 Feb. 1963 (3) 30 June 1981
APPROVAL DATE FEB 1957

NATIONAL AEROSPACE STANDARD

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC., 1725 DE SALES STREET, N. W., WASHINGTON, D. C. 20036

STANDARD BLIND FASTENER RECOMMENDED INSTALLATION CRITERIA

BASIC FASTENER SIZE	SHANK DIA	CLEARANCE FIT	DRILL SIZE & TOLERANCE	INTERFERENCE FIT	REAM AND TOLERANCE
#8 (.164)	.1645 .1635	.0005 INTERFERENCE .0035 CLEARANCE	4.2 mm (.1654) .164 TO .167	.0015 CLEARANCE .0015 INTERFERENCE	.163 .163 TO .165
#10 (.190)	.1895 .1885		#12 (.189) .189 TO .192		.188 .188 TO .190
1/4 (.250)	.2495 .2485		1/4 (.250) .249 TO .252		.248 .248 TO .250
5/16 (.3125)	.3120 .3110	.0005 INTERFERENCE .0045 CLEARANCE	5/16 (.3125) .3115 TO .3155	.0015 CLEARANCE	.3095 .3095 TO .3125
3/8 (.375)	.3745 .3735		3/8 (.375) .374 TO .378	.0025 INTERFERENCE	.372 .372 TO .375
7/16 (.4375)	.4370 .4360		7/16 (.4375) .4365 TO .4405	.0015 CLEARANCE	.4331 (11 mm) .4335 TO .4375
1/2 (.500)	.4995 .4985		1/2 (.500) .499 TO .503	.0035 INTERFERENCE	.496 .496 TO .500

.016 OVERSIZE BLIND FASTENER SHANK DIAMETERS AND RECOMMENDED INSTALLATION CRITERIA

BASIC FASTENER SIZE	SHANK DIA	CLEARANCE FIT	DRILL SIZE & TOLERANCE	INTERFERENCE FIT	REAM AND TOLERANCE
#8 (.164)	.1796 .1786	.0005 INTERFERENCE .0035 CLEARANCE	#15 (.1800) .1791 TO .1821	.0015 CLEARANCE .0015 INTERFERENCE	.1781 .1781 TO .1801
#10 (.190)	.2026 .2016		13/64 (.2031) .2021 TO .2051		.2011 .2011 TO .2031
1/4 (.250)	.2651 .2641		17/64 (.2656) .2646 TO .2676		.2636 .2636 TO .2656
5/16 (.312)	.3276 .3266	.0005 INTERFERENCE .0045 CLEARANCE	21/64 (.3281) .3271 TO .3311	.0015 CLEARANCE	.3251 .3251 TO .3281
3/8 (.375)	.3901 .3891		25/64 (.3906) .3896 TO .3935	.0025 INTERFERENCE	.3876 .3876 TO .3906
7/16 (.438)	.4526 .4516		29/64 (.4531) .4521 TO .4561	.0015 CLEARANCE	.4491 .4491 TO .4531
1/2 (.500)	.5151 .5141		33/64 (.5156) .5146 TO .5186	.0035 INTERFERENCE	.5116 .5116 TO .5156

.032 OVERSIZE BLIND FASTENER SHANK DIAMETERS AND RECOMMENDED INSTALLATION CRITERIA

BASIC FASTENER SIZE	SHANK DIA	CLEARANCE FIT	DRILL SIZE & TOLERANCE	INTERFERENCE FIT	REAM AND TOLERANCE
#10 (.190)	.2182 .2172	.0005 INTERFERENCE .0035 CLEARANCE	7/32 (.2187) .2177 TO .2207	.0015 CLEARANCE .0015 INTERFERENCE	.2167 .2167 TO .2187
1/4 (.250)	.2807 .2797		9/32 (.2812) .2802 TO .2832		.2792 .2792 TO .2812
5/16 (.312)	.3432 .3422	.0005 INTERFERENCE .0045 CLEARANCE	11/32 (.3437) .3427 TO .3467	.0015 CLEARANCE	.3407 .3407 TO .3437
3/8 (.375)	.4057 .4047		13/32 (.4062) .4052 TO .4092	.0025 INTERFERENCE	.4032 .4032 TO .4062
7/16 (.438)	.4682 .4672		15/32 (.4687) .4677 TO .4717	.0015 CLEARANCE	.4647 .4647 TO .4687
1/2 (.500)	.5307 .5297		17/32 (.5312) .5302 TO .5342	.0035 INTERFERENCE	.5272 .5272 TO .5312

DESIGN ASPECTS

THIS STANDARD IS INTENDED TO MEET DESIGN REQUIREMENTS FOR BOTH CLEARANCE AND INTERFERENCE FIT APPLICATIONS PROVIDING ONE DIAMETER SIZE AS THE BASIC STANDARD.

FASTENER DIAMETERS ARE COMPARABLE TO DESIGN STANDARD NAS618.

TOLERANCE (.001) ON SHANK DIAMETER INCLUDES ALLOWANCE FOR PLATING REQUIREMENTS.

CONTROL OF RECOMMENDED HOLE TOLERANCES AND FITS ARE LEFT TO THE DISCRETION OF THE USER TO FULFILL INDIVIDUAL DESIGN REQUIREMENTS. BOLT AND NUTPLATE REPLACEMENT MAY HAVE A MAXIMUM CLEARANCE OF .0045". HOLE SIZES INFER THE USE OF MULTIPLE OPERATIONS SUCH AS PRE-DRILL AND CORE DRILL OR PRE-DRILL AND REAM.

FASTENERS AS DESIGNED DO NOT PERMIT REPLACEMENT WITHOUT REMOVAL OF THE MANUFACTURED HEAD (DRILLED OUT) FROM THE OUTSIDE.

TOOLING REQUIREMENTS ARE TO BE BASED UPON INDIVIDUAL PRODUCTION PRACTICES TO MEET FASTENER INSTALLATION TOLERANCE REQUIREMENTS.

CUSTODIAN: NATIONAL AEROSPACE STANDARDS COMMITTEE

PROCUREMENT
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APPROVAL DATE FEB 1957
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