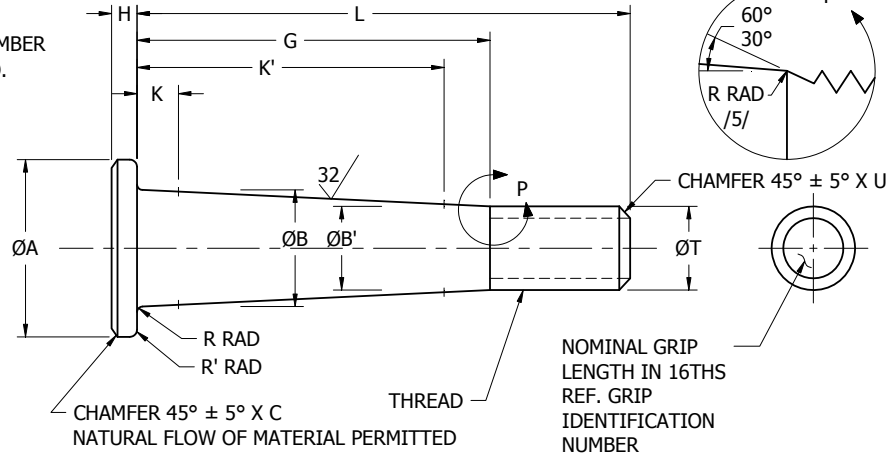
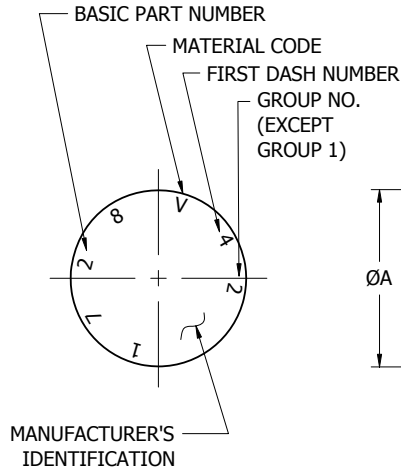


FED. SUPPLY CLASS

5320

HEAD MARKING RAISED OR DEPRESSED .010 MAX

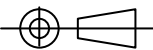


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FIGURE 1 – FASTENER
TABLE I – DIMENSIONS

FIRST DASH NO.	THREAD /1/	ØT	GROUP NO.	ØA		H	C MAX	R RAD +.010 -.000	R' RAD +.010 -.000	U MAX	X /2/	Y /2/	Z /4/
				MAX	MIN								
05	.1640-36 UNJF-3A	.1620 .1585	1	.274	.264	.049	.015	.010	.005	.024	.007	.0040	.007
			2	.282	.272	.039							
			3	.290	.280								
3	.1900-32 UNJF-3A	.1880 .1840	1	.312	.302	.056	.020	.015	.010	.027	.008	.0045	.008
			2	.323	.312	.044							
			3	.339	.328								
4	.2500-28 UNJF-3A	.2480 .2435	1	.389	.379	.070	.031	.015	.010	.031	.010	.0045	.010
			2	.403	.392	.058							
			3	.421	.411								
5	.3125-24 UNJF-3A	.3105 .3053	1	.487	.475	.080	.031	.020	.015	.035	.012	.0045	.012
			2	.502	.490	.068							
			3	.524	.512								
6	.3750-24 UNJF-3A	.3730 .3678	1	.581	.567	.094	.041	.020	.020	.035	.014	.0060	.014
			2	.596	.582	.082							
			3	.619	.605								
7	.4375-20 UNJF-3A	.4355 .4294	1	.685	.669	.132	.047	.030	.020	.040	.016	.0060	.016
			2	.703	.687	.120							
			3	.730	.714								
8	.5000-20 UNJF-3A	.4980 .4919	1	.767	.751	.156	.047	.030	.020	.040	.016	.0060	.016
			2	.788	.772	.144							
			3	.818	.802								
9	.5625-18 UNJF-3A	.5605 .5538	1	.885	.869	.180	.060	.063	.030	.045	.018	.0060	.018
			2	.915	.899	.168							
			3	.945	.929								
10	.6250-18 UNJF-3A	.6230 .6163	1	1.011	.995	.204	.060	.063	.030	.045	.018	.0060	.018
			2	1.044	1.028	.192							
			3	1.077	1.061								
12	.7500-16 UNJF-3A	.7480 .7406	1	1.133	1.117	.252	.070	.063	.030	.045	.020	.0060	.020
			2	1.171	1.155	.238							
			3	1.209	1.193								
14	.8750-14 UNJF-3A	.8730 .8647	1	1.258	1.242	.300	.080	.063	.040	.050	.020	.0080	.020
			2	1.304	1.288	.284							
			3	1.350	1.334								
16	1.0000-12 UNJF-3A	.9980 .9886	1	1.455	1.429	.348	.090	.063	.040	.050	.020	.0080	.020
			2	1.496	1.480	.332							
			3	1.547	1.531								

THIRD
ANGLE
PROJECTION



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PROCUREMENT
SPECIFICATION

NAS1730

TITLE

**FASTENER, SHEAR, PROTRUDING HEAD, TAPERED
SHANK (TS), 95 KSI Fsu, 108 KSI Fsu, 110 KSI Fsu,
125 KSI Fsu, 132 KSI Fsu, & 156 KSI Fsu**

③

CLASSIFICATION

PART STANDARD

NAS1730
SHEET 1 OF 13



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MATERIAL:

ALLOY STEEL: 4140 (UNS G41400) PER AMS6382, 4340 (UNS G43400) PER AMS6484, 4340 (UNS G43406) PER AMS6415 OR 8740 (UNS G84700) PER MIL-S-6049 AMS6322, AMS6325, OR AMS6327.
H-11 STEEL ALLOY: (UNS T20811) PER AMS6487.
CRES: A286 (UNS S66286) CONFORMING TO THE CHEMISTRY OF AMS5731, AMS5732, AMS5737 OR AMS5853.
TITANIUM ALLOY: 6AL-4V (UNS RS6400) PER AMS4928 OR AMS4967.
PH13-8Mo MARTENSITIC PRECIPITATION HARDENING STAINLESS STEEL: (UNS S13800) PER AMS5629.

HEAT TREATMENT:

DEVELOP BASIC MATERIAL PROPERTIES AS FOLLOWS, WITH CONTROLS PER AMS2759 FOR ALLOY STEEL AND CRES AND AMS-H-81200 OR AMS2801 FOR TITANIUM:

ALLOY STEEL: 108 KSI MIN SHEAR, 180-200 KSI TENSILE.
H-11 STEEL ALLOY: 132 KSI MIN SHEAR, 220-260 KSI TENSILE OR 156 KSI MIN SHEAR, 260-290 KSI TENSILE.
A286 ALLOY: 95 KSI MIN SHEAR, 160 KSI MIN TENSILE OR 110 KSI MIN SHEAR, 200 KSI MIN TENSILE.
6AL-4V TITANIUM ALLOY: 95 KSI MIN SHEAR, 160 KSI MIN TENSILE.
PH13-8Mo PRECIPITATION HARDENING STAINLESS STEEL: 125 KSI MIN SHEAR, 220 KSI MIN TENSILE.

FINISH:

ALLOY STEEL: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, HYDROGEN RELIEVE FOR 23 HOURS MIN AT 375 °F.
H-11 STEEL ALLOY: VACUUM CADMIUM PLATE PER AMS-C-8837 DIFFUSED NICKEL-CADMIUM PLATE PER AMS2416.
A286 ALLOY: PASSIVATE PER AMS2700, METHOD 1, CLASS 4, CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, HYDROGEN RELIEVE FOR 23 HOURS MIN AT 375 °F.
6AL-4V TITANIUM ALLOY: NONE.
PH13-8Mo STAINLESS STEEL: PASSIVATE PER AMS2700, METHOD 1, CLASS 4.
CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, HYDROGEN RELIEVE FOR 23 HOURS MIN AT 375 °F.

LUBRICATION:

ALL MATERIALS: CETYL ALCOHOL PER NAS1730.
IN LIEU OF PLATING ON A286, 6AL-4V AND PH13-8Mo AND OVER PLATING ON H-11 AND ALLOY STEEL: DRY FILM LUBRICANT PER NAS1730.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE.

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Documents

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CODE:

FIRST DASH NUMBER DESIGNATES NOMINAL PIN DIAMETER.
SECOND DASH NUMBER DESIGNATES GRIP LENGTH IN INCREMENTS OF .0625.
MATERIAL CODE: PRECEDING FIRST DASH NUMBER
"—" DESIGNATES ALLOY STEEL, 108 KSI MIN SHEAR
"H" DESIGNATES H-11 STEEL, 132 KSI MIN SHEAR
"HC" DESIGNATES H-11 STEEL, 156 KSI MIN SHEAR
"C" DESIGNATES A286 CRES, 95 KSI MIN SHEAR
"CB" DESIGNATES A286 CRES, 110 KSI MIN SHEAR
"V" DESIGNATES 6AL-4V TITANIUM ALLOY, 95 KSI MIN SHEAR
"D" DESIGNATES PH13-8Mo PRECIPITATION-HARDENING STEEL, 125 KSI MIN SHEAR
FINISH CODE: BETWEEN FIRST AND SECOND DASH NUMBER
"—" DESIGNATES TYPE II CADMIUM PLATE FOR ALLOY STEEL, VACUUM CADMIUM PLATE FOR H-11, PASSIVATE PER AMS2700, METHOD 1, CLASS 4 FOR A286 AND PH13-8Mo STEEL
"Z" DESIGNATES DIFFUSED NICKEL CADMIUM PLATE
"W" DESIGNATES CADMIUM PLATE PER AMS-QQ-P-416
LUBRICATION CODE: FOLLOWING SECOND DASH NUMBER
NO SYMBOL DESIGNATES CETYL ALCOHOL
"D" DESIGNATES DRY FILM LUBRICANT
"E" DESIGNATES DRY FILM LUBE WITH ADDITION OF CETYL ALCOHOL

EXAMPLES OF PART NUMBERS:

NAS1728V5-10D = .3125-24 THREAD, .625 GRIP, TITANIUM PIN, DRY FILM LUBRICANT
NAS1728H05Z12 = .1640-36 THREAD, .750 GRIP, 132 KSI MIN SHEAR, H-11 PIN, DIFFUSED NICKEL CADMIUM PLATE, CETYL ALCOHOL LUBRICANT
NAS1728-16-32 = 1.0000-12 THREAD, 2.000 GRIP, ALLOY STEEL PIN, CETYL ALCOHOL LUBRICANT, TYPE II CADMIUM PLATE
NAS1728C10W11 = .6250-18 THREAD, .687 GRIP, 95 KSI MIN. SHEAR, A286 PIN, CADMIUM PLATE, CETYL ALCOHOL LUBRICANT

NOTES:

- /1/ THREADS IN ACCORDANCE WITH AS8879.
- /2/ CONCENTRICITY:
 - A. TAPER SHANK AT "K" AND THREAD PITCH DIAMETER TO BE CONCENTRIC WITH "Y" VALUES FIM.
 - B. "ØA" AND TAPER SHANK AT "K" TO BE CONCENTRIC WITHIN "X" VALUES FIM.
- /3/ REMOVE ALL BURRS AND BREAK SHARP EDGES .015 MAX.
- /4/ HEAD O.D. OUT OF ROUNDNESS TO BE WITHIN "Z" VALUES.
- /5/ THREAD TO SHANK INTERSECTION RADIUS:

FOR "-05" THRU "-8", "S RAD" = .010 MIN TO .030 MAX
FOR "-9" THRU "-16", "S RAD" = .030 MIN TO .050 MAX
- (6) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- (7) GRIP LENGTH IS MEASURED FROM TOP OF HEAD TO THEORETICAL INTERSECTION OF TAPERED SHANK AND THREAD RUNOUT ANGLE.

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- (8) DIMENSIONS IN INCHES AND APPLY AFTER FINISH AND PRIOR TO THE APPLICATION OF LUBRICATION UNLESS OTHERWISE SPECIFIED.
- (9) EXPLANATION OF GROUP ARRANGEMENT SHOWN IN LENGTH TABLES IS SHOWN IN FIGURE 2.
- /10/ SEE NAS1729 FOR OVERSIZE FASTENERS.
- (11) NAS1726 AND NAS1727 NUTS ARE REFERENCED AS APPLICABLE.
- (12) SURFACE TEXTURE: TAPER SHANK: 32 MICROINCHES Ra; ALL OTHER SURFACES SHALL NOT EXCEED 125 MICROINCHES Ra PER ASME B46.1. SURFACE TEXTURE SYMBOLS SHALL BE IN ACCORDANCE WITH ASME Y14.36M.
- (13) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (14) UNLESS OTHERWISE SPECIFIED HEREIN, REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF MANUFACTURE. HOWEVER, EXISTING MATERIAL INVENTORY CERTIFIED TO A PREVIOUS REVISION OF THE APPLICABLE MATERIAL SPECIFICATION(S) IS ACCEPTABLE FOR USE UNTIL DEPLETION.
- (15) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.

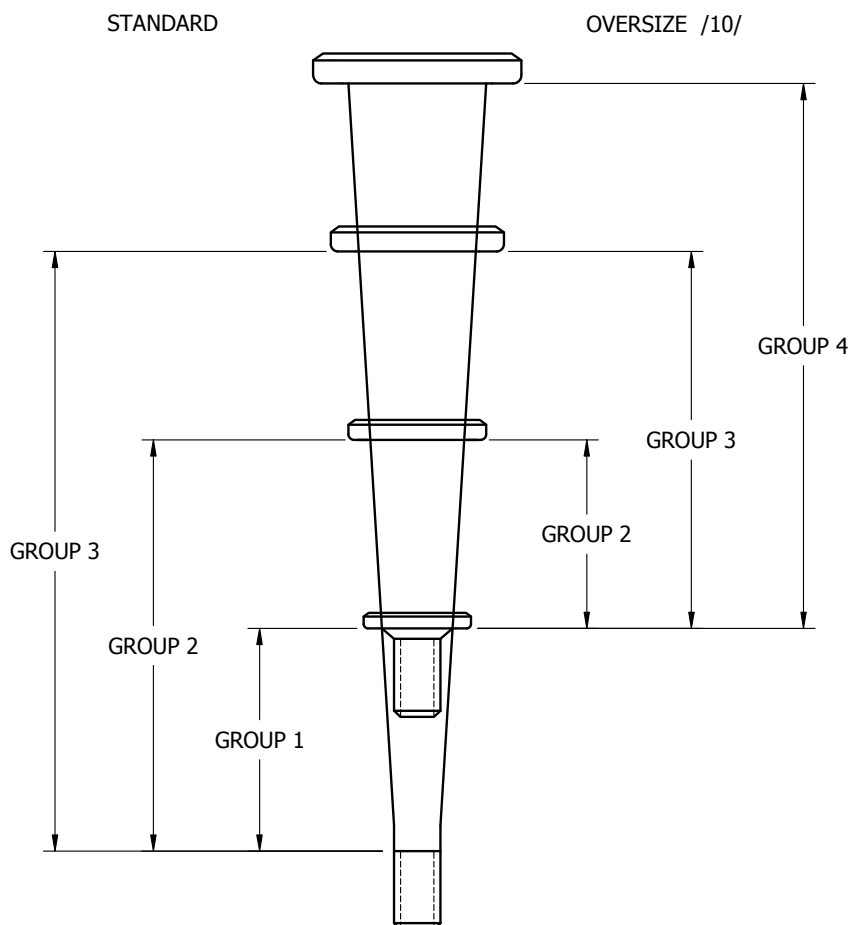


FIGURE 2 – GROUP ARRANGEMENT

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