

REV. G

AS1790

FEDERAL SUPPLY CLASS

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

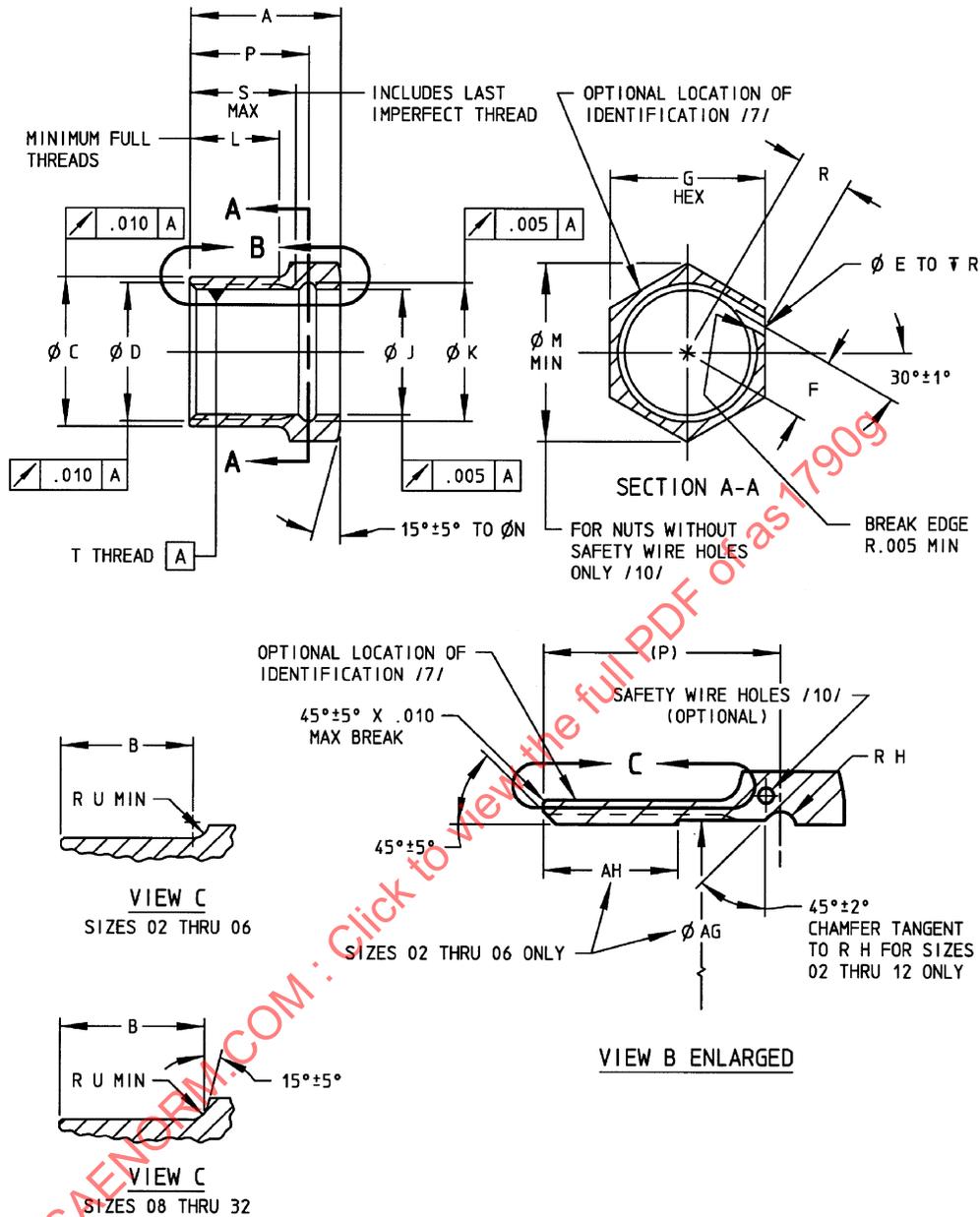
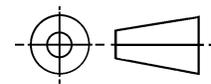


FIGURE 1 - NUT, FITTING, RETAINED, LIGHTWEIGHT



THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4444

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

NUT, FITTING, RETAINED, LIGHTWEIGHT

**AS1790**  
SHEET 1 OF 4

**REV. G**

ISSUED 1995-12 REVISED 1999-01 REAFFIRMED 2005-06

**REV.  
G**

**AS1790**

TABLE 1A - DIMENSIONS

BASIC NO. AS1790 /17/ SIZE CODE	NOM TUBE SIZE REF	T THREAD PER AS8879	A ±.010	B ±.010	C	D ±.010	E	F
02	.125	.3125-24UNJF-3B	.530	.288	.418	.331	.077	.136
03	.188	.3750-24UNJF-3B	.580	.274	.480	.394	.077	.167
04	.250	.4375-20UNJF-3B	.615	.258	.524	.456	.077	.194
05	.312	.5000-20UNJF-3B	.687	.330	.587	.519	.086	.224
06	.375	.5625-18UNJF-3B	.718	.361	.649	.581	.086	.252
08	.500	.7500-16UNJF-3B	.843	.500	.842	.769	.101	.341
10	.625	.8750-14UNJF-3B	.968	.625	.968	.894	.101	.396
12	.750	1.0625-12UNJ-3B	1.015	.640	1.177	1.082	.131	.485
14	.875	1.1875-12UNJ-3B	1.100	.725	1.302	1.208	.131	.549
16	1.000	1.3125-12UNJ-3B	1.125	.750	1.427	1.332	.131	.610
20	1.250	1.6250-12UNJ-3B	1.168	.778	1.740	1.645	.131	.766
24	1.500	1.8750-12UNJ-3B	1.358	.920	2.055	1.895	.131	.893
32	2.000	2.5000-12UNJ-3B	1.684	1.184	2.678	2.520	.131	1.200

TABLE 1B - DIMENSIONS

BASIC NO. AS1790 /17/ SIZE CODE	G	H ±.001	J	K	L	M MIN /10/	N ±.010	P ±.004
02	.428- .440	.038	.2719- .2799	.341- .347	.316	.495	.418	.430
03	.490- .502	.038	.3344- .3418	.401- .411	.362	.568	.480	.450
04	.552- .565	.038	.3888- .3970	.456- .466	.384	.638	.542	.500
05	.615- .628	.043	.4513- .4591	.526- .536	.406	.709	.605	.550
06	.678- .691	.043	.5084- .5166	.583- .593	.422	.780	.668	.573
08	.865- .878	.050	.6892- .6977	.776- .786	.487	.993	.855	.660
10	.990-1.003	.050	.8055- .8152	.891- .901	.586	1.120	.980	.763
12	1.238-1.253	.065	.9814- .9914	1.097-1.107	.573	1.400	1.228	.780
14	1.363-1.380	.065	1.1064-1.1164	1.227-1.237	.573	1.540	1.353	.850
16	1.488-1.505	.065	1.2314-1.2414	1.347-1.357	.573	1.650	1.474	.875
20	1.800-1.817	.065	1.5439-1.5539	1.659-1.669	.573	1.993	1.790	.959
24	2.109-2.135	.065	1.7939-1.8039	1.912-1.922	.661	2.338	2.099	1.105
32	2.734-2.760	.065	2.4189-2.4289	2.537-2.547	.844	3.025	2.724	1.340

REV.  
G

AS1790

TABLE 1C - DIMENSIONS AND WEIGHTS

BASIC NO. AS1790 /17/ SIZE CODE	R ±.015	S MAX	U MIN	AG	AH ±.010	LB/100 NOM REF ALUM	LB/100 NOM REF CRES	LB/100 NOM REF TI
02	.172	.369	.060	.298	.310	.436	1.23	.699
03	.190	.389	.060	.358	.310	.580	1.64	.930
04	.210	.434	.060	.415	.345	.712	2.00	1.14
05	.230	.481	.060	.477	.345	.883	2.49	1.42
06	.250	.505	.060	.534	.345	1.06	2.98	1.69
08	.306	.581	.060	-	-	1.67	4.70	2.67
10	.347	.693	.070	-	-	2.29	6.47	3.68
12	.439	.691	.085	-	-	3.80	10.7	6.09
14	.475	.751	.085	-	-	4.58	12.9	7.34
16	.512	.776	.115	-	-	5.19	14.6	8.32
20	.602	.860	.115	-	-	6.80	19.2	10.9
24	.710	1.006	.115	-	-	12.2	34.4	19.5
32	.893	1.241	.115	-	-	20.3	57.2	32.5

## NOTES:

## /1/ MATERIAL:

- a. CODE LETTER A - TYPE A286, CONDITION STA, CORROSION RESISTANT STEEL PER AMS 5731, AMS 5732, AMS 5734 OR AMS 5737.
- b. CODE LETTER J - TYPE 304, CONDITION A, CORROSION RESISTANT STEEL PER QQ-S-763 OR AMS 5639.
- c. CODE LETTER T - TYPE 6AL-4V, CONDITION A, TITANIUM ALLOY PER AMS 4928, AMS 4967 OR MIL-T-9047.
- d. CODE LETTER V - TYPE 15-5PH, CONDITION H1075 STA, CORROSION RESISTANT STEEL PER AMS 5659 (FORMERLY CODE LETTER G /8/).
- e. CODE LETTER W - TYPE 7075-T73 OR T7351, ALUMINUM ALLOY PER AMS-QQ-A-225/9 OR AMS 4124.

## 2. HEAT TREATMENT:

- a. MATERIAL CODE LETTER A - IF THE MATERIAL IS PROCURED IN THE SOLUTION TREATED CONDITION, AGE TO 28-40 HRC, 130 KSI UTS MIN PER MIL-H-6875 OR AMS 2759/3.
- b. MATERIAL CODE LETTER J - NONE.
- c. MATERIAL CODE LETTER T - NONE.
- d. MATERIAL CODE LETTER V - AGE TO CONDITION H1075 PER MIL-H-6875 OR AMS 2759/3.
- e. MATERIAL CODE LETTER W - IF THE RAW MATERIAL IS PROCURED IN THE SOLUTION TREATED CONDITION, AGE TO FINAL TEMPER PER AMS-H-6088 OR AMS 2770.



**SAE Aerospace**  
An SAE International Group

## AEROSPACE STANDARD

NUT, FITTING, RETAINED, LIGHTWEIGHT

**AS1790**  
SHEET 3 OF 4

**REV.**  
**G**