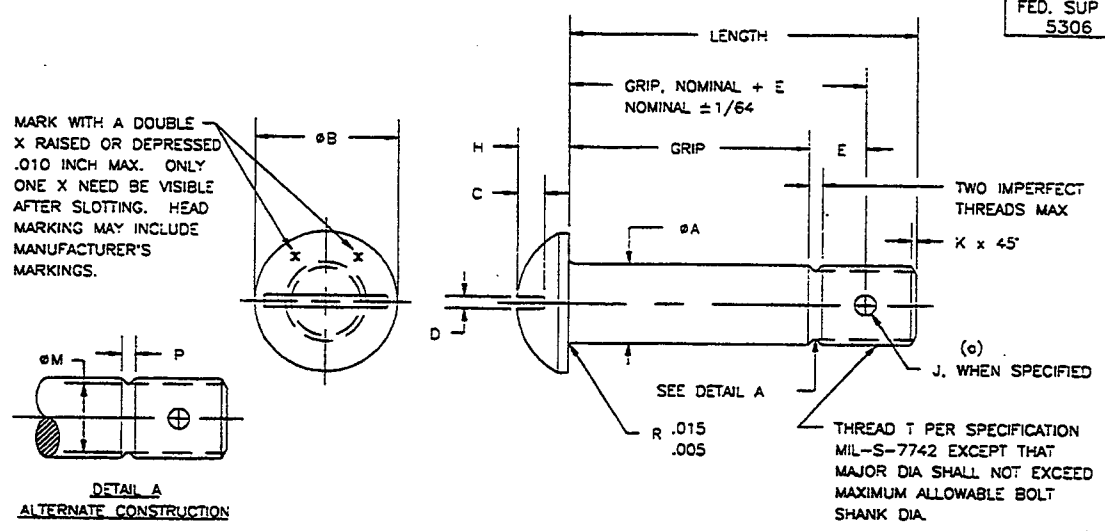


APPROVED 16 NOV 42 REVISED 4 23 DEC 52 5 15 JUN 56 6 29 MAY 59 7 25 MAY 63 8 8 APR 95 9 20 JUL 95 10 10 NOV 95 11 22 MAR 96

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11 BASIC AN PART NO.	THREAD T 11	ØA +.000 -.002	ØB	C	D	E REF	H	ØJ DRILL +.010 -.000	K +.016	ØM +.005	P	RATED STRENGTH, POUNDS	
												SINGLE SHEAR AT FULL DIA	(5) TENSILE
AN21	NO. 6-40UNF-3A	.136	5/16	3/64	1/32	5/32	5/64	.038	.031	.100	1/32	1,050	510
AN22	NO. 8-36UNF-3A	.162	3/8	1/16	3/64	5/32	3/32	.070	.031	.120	1/32	1,500	760
AN23	NO. 10-32UNF-3A	.186	3/8	1/16	3/64	3/16	3/32	.070	.031	.141	3/64	2,125	1,105
AN24	1/4-28UNF-3A	.248	1/2	3/32	1/16	3/16	1/8	.076	.031	.196	3/64	3,680	2,040
AN25	5/16-24UNF-3A	.311	5/8	7/64	5/64	3/16	5/32	.076	.047	.250	1/16	5,750	3,250
AN26	3/8-24UNF-3A	.373	11/16	9/64	3/32	7/32	3/16	.106	.047	.313	1/16	8,280	5,050
AN27	7/16-20UNF-3A	.436	13/16	5/32	3/32	7/32	7/32	.106	.047	.360	1/16	11,250	6,800
AN28	1/2-20UNF-3A	.497	7/8	11/64	7/64	1/4	1/4	.106	.047	.422	1/16	14,700	9,250
AN29	9/16-18UNF-3A	.560	1	3/16	7/64	5/16	9/32	.141	.062	.482	5/64	18,700	11,800
AN30	5/8-18UNF-3A	.622	1-1/8	3/16	1/8	5/16	5/16	.141	.062	.545	5/64	23,000	15,050
AN32	3/4-16UNF-3A	.747	1-5/16	13/64	9/64	3/8	3/8	.141	.062	.660	3/32	33,150	22,000
AN34	7/8-14UNF-3A	.871	1-1/2	7/32	5/32	7/16	7/16	.141	.078	.773	3/32	45,050	30,000
(d) AN36	1-12NF-3A	.996	1-3/4	15/64	11/64	1/2	1/2	.141	.078	.898	3/32	58,900	40,350
AN37	1-12UNF-3A	.996	1-3/4	15/16	11/64	1/2	1/2	.141	.078	.898	3/32	58,900	40,350

- (c) COTTER PIN HOLE CENTERLINE SHALL BE WITHIN .010 INCH OF BOLT CENTER LINE FOR 5/16 DIAMETER BOLTS AND SMALLER, AND WITHIN .015 INCH FOR 3/8 DIAMETER BOLTS AND LARGER. COTTER PIN HOLE TO BE NORMAL TO BOLT CENTERLINE WITHIN 2°.
- (b) RATED TENSILE STRENGTHS APPLICABLE ONLY WHEN SHEAR NUT AN320 OR THIN NUT AN364 IS USED.
- (c) GRIP LENGTH OF BOLTS SHALL BE MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK.
- (d) 1-4 NF-3 THREAD PITCH INACTIVE FOR DESIGN AFTER 15 JUNE 1966.

- 11 REQUIREMENTS:
1. MATERIAL: NON-CORROSION RESISTING STEEL, 4130 (UNS G41300) PER MIL-S-6758 OR 8740 (UNS G87400) PER MIL-S-6049.
 2. FINISH: CADMIUM PLATE, SPECIFICATION QQ-P-416 TYPE II, CLASS 2.
 3. ADD A AFTER DASH NUMBER FOR BOLT WITHOUT COTTER PIN HOLE.
 4. EXAMPLES OF PART NUMBERS: AN21-14 = NO. 6 BOLT, 29/32 INCH LONG, WITH COTTER PIN HOLE. AN21-14A = NO. 6 BOLT, 29/32 INCH LONG, WITHOUT COTTER PIN HOLE.
 5. POSITION OF SLOT IN HEAD RELATIVE TO COTTER PIN HOLE OPTIONAL.

- NOTES:
1. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ± .010, FRACTIONS ± 1/64, ANGLES ± 5°.
 2. BOLTS SHALL BE FREE FROM ALL HANGING BURRS AND SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE. COUNTERSINKING OF DRILLED HOLES IS OPTIONAL.
 3. LENGTHS LONGER THAN THOSE TABULATED ON SHEETS 2 AND 3 ARE AVAILABLE IN 1/8 INCH INCREMENTS BY USE OF OF SIGNIFICANT DASH NUMBERS.
 4. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
 5. UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.

11 DENOTES CHANGE(S)

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P.A. DLA-IS	AIR FORCE - NAVY AERONAUTICAL STANDARD		AN21 THRU AN37
Other Cust ARMY - AV AIR FORCE - 99	BOLT - CLEVIS		
PROCUREMENT SPECIFICATION MIL-B-6812	SUPERSEDES: FORMER ANA STANDARD AND AIR FORCE AND NAVY STANDARD ISSUES OF AN21 THRU AN36		SHEET 1 OF 3

22 Mar 96
11
10 Nov 95
10
20 Jul 95
9
8 Apr 95
8
25 May 83
7
29 May 69
6
15 Jun 66
5
23 Dec 52
4
16 Nov 42
REVISED

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AMSC N/A

DASH NO	AN21		AN22		AN23		AN24		AN25		AN26		AN27	
	GRIP	LENGTH	GRIP	LENGTH	GRIP	LENGTH	GRIP	LENGTH	GRIP	LENGTH	GRIP	LENGTH	GRIP	LENGTH
5	1/16	11/32	1/16	11/32										
6	1/8	13/32	1/8	13/32										
7	3/16	15/32	3/16	15/32										
8	1/4	17/32	1/4	17/32	3/16	17/32	3/16	17/32						
9	5/16	19/32	5/16	19/32	1/4	19/32	1/4	19/32	1/4	39/64	1/4	39/64		
10	3/8	21/32	3/8	21/32	5/16	21/32	5/16	21/32	5/16	43/64	5/16	43/64		
11	7/16	23/32	7/16	23/32	3/8	23/32	3/8	23/32	3/8	47/64	3/8	47/64		
12	1/2	25/32	1/2	25/32	7/16	25/32	7/16	25/32	7/16	51/64	7/16	51/64	3/8	51/64
13	9/16	27/32	9/16	27/32	1/2	27/32	1/2	27/32	1/2	55/64	1/2	55/64	7/16	55/64
14	5/8	29/32	5/8	29/32	9/16	29/32	9/16	29/32	9/16	59/64	9/16	59/64	7/16	59/64
15	11/16	31/32	11/16	31/32	5/8	31/32	5/8	31/32	5/8	63/64	5/8	63/64	9/16	63/64
16	3/4	1-1/32	3/4	1-1/32	11/16	1-1/32	11/16	1-1/32	11/16	1-3/64	11/16	1-3/64	9/16	1-3/64
17	13/16	1-3/32	13/16	1-3/32	3/4	1-3/32	3/4	1-3/32	3/4	1-7/64	3/4	1-7/64	11/16	1-7/64
18	7/8	1-5/32	7/8	1-5/32	13/16	1-5/32	13/16	1-5/32	13/16	1-11/64	13/16	1-11/64	3/4	1-11/64
19	15/16	1-7/32	15/16	1-7/32	7/8	1-7/32	7/8	1-7/32	7/8	1-15/64	7/8	1-15/64	13/16	1-15/64
20	1	1-9/32	1	1-9/32	15/16	1-9/32	15/16	1-9/32	15/16	1-19/64	15/16	1-19/64	7/8	1-19/64
21	1-1/16	1-11/32	1-1/16	1-11/32	1	1-11/32	1	1-11/32	1	1-23/64	1	1-23/64	15/16	1-23/64
22	1-1/8	1-13/32	1-1/8	1-13/32	1-1/16	1-13/32	1-1/16	1-13/32	1-1/16	1-27/64	1-1/16	1-27/64	1	1-27/64
23	1-3/16	1-15/32	1-3/16	1-15/32	1-1/8	1-15/32	1-1/8	1-15/32	1-1/8	1-31/64	1-1/8	1-31/64	1-1/16	1-31/64
24	1-1/4	1-17/32	1-1/4	1-17/32	1-3/16	1-17/32	1-3/16	1-17/32	1-3/16	1-35/64	1-3/16	1-35/64	1-1/8	1-35/64
25	1-5/16	1-19/32	1-5/16	1-19/32	1-1/4	1-19/32	1-1/4	1-19/32	1-1/4	1-39/64	1-1/4	1-39/64	1-3/16	1-39/64
26	1-3/8	1-21/32	1-3/8	1-21/32	1-5/16	1-21/32	1-5/16	1-21/32	1-5/16	1-43/64	1-5/16	1-43/64	1-3/16	1-43/64
27	1-7/16	1-23/32	1-7/16	1-23/32	1-3/8	1-23/32	1-3/8	1-23/32	1-3/8	1-47/64	1-3/8	1-47/64	1-5/16	1-47/64
28	1-1/2	1-25/32	1-1/2	1-25/32	1-7/16	1-25/32	1-7/16	1-25/32	1-7/16	1-51/64	1-7/16	1-51/64	1-3/8	1-51/64
29	1-9/16	1-27/32	1-9/16	1-27/32	1-1/2	1-27/32	1-1/2	1-27/32	1-1/2	1-55/64	1-1/2	1-55/64	1-7/16	1-55/64
30	1-5/8	1-29/32	1-5/8	1-29/32	1-9/16	1-29/32	1-9/16	1-29/32	1-9/16	1-59/64	1-9/16	1-59/64	1-1/2	1-59/64
31	1-11/16	1-31/32	1-11/16	1-31/32	1-5/8	1-31/32	1-5/8	1-31/32	1-5/8	1-63/64	1-5/8	1-63/64	1-9/16	1-63/64
32	1-3/4	2-1/32	1-3/4	2-1/32	1-11/16	2-1/32	1-11/16	2-1/32	1-11/16	2-3/64	1-11/16	2-3/64	1-5/8	2-3/64
34					1-13/16	2-5/32	1-13/16	2-5/32	1-13/16	2-11/64	1-13/16	2-11/64	1-3/4	2-11/64
36					1-15/16	2-9/32	1-15/16	2-9/32	1-15/16	2-19/64	1-15/16	2-19/64	1-1/8	2-19/64
38					2-1/16	2-13/32	2-1/16	2-13/32	2-1/16	2-27/64	2-1/16	2-27/64	2	2-27/64
40					2-3/16	2-17/32	2-3/16	2-17/32	2-3/16	2-35/64	2-3/16	2-35/64	2-1/8	2-35/64
42					2-5/16	2-21/32	2-5/16	2-21/32	2-5/16	2-43/64	2-5/16	2-43/64	2-1/4	2-43/64
44					2-7/16	2-25/32	2-7/16	2-25/32	2-7/16	2-51/64	2-7/16	2-51/64	2-3/8	2-51/64
46					2-9/16	2-29/32	2-9/16	2-29/32	2-9/16	2-59/64	2-9/16	2-59/64	2-1/2	2-59/64
48					2-11/16	3-1/32	2-11/16	3-1/32	2-11/16	3-3/64	2-11/16	3-3/64	2-5/8	3-3/64
50					2-13/16	3-5/32	2-13/16	3-5/32	2-13/16	3-11/64	2-13/16	3-11/64	2-3/4	3-11/64
52					2-15/16	3-9/32	2-15/16	3-9/32	2-15/16	3-19/64	2-15/16	3-19/64	2-7/8	3-19/64
54					3-1/16	3-13/32	3-1/16	3-13/32	3-1/16	3-27/64	3-1/16	3-27/64	3	3-27/64
56					3-3/16	3-17/32	3-3/16	3-17/32	3-3/16	3-35/64	3-3/16	3-35/64	3-1/8	3-35/64
58					3-5/16	3-21/32	3-5/16	3-21/32	3-5/16	3-43/64	3-5/16	3-43/64	3-1/4	3-43/64
60					3-7/16	3-25/32	3-7/16	3-25/32	3-7/16	3-51/64	3-7/16	3-51/64	3-3/8	3-51/64
62					3-9/16	3-29/32	3-9/16	3-29/32	3-9/16	3-59/64	3-9/16	3-59/64	3-1/2	3-59/64
64					3-11/16	4-1/32	3-11/16	4-1/32	3-11/16	4-3/64	3-11/16	4-3/64	3-5/8	4-3/64
66					3-13/16	4-5/32	3-13/16	4-5/32	3-13/16	4-11/64	3-13/16	4-11/64	4-1/4	4-11/64
68					3-15/16	4-9/32	3-15/16	4-9/32	3-15/16	4-19/64	3-15/16	4-19/64	4-3/8	4-19/64
70					4-1/16	4-13/32	4-1/16	4-13/32	4-1/16	4-27/64	4-1/16	4-27/64	4	4-27/64
72					4-3/16	4-17/32	4-3/16	4-17/32	4-3/16	4-35/64	4-3/16	4-35/64	4-1/8	4-35/64
74					4-5/16	4-21/32	4-5/16	4-21/32	4-5/16	4-43/64	4-5/16	4-43/64	4-3/8	4-43/64
76					4-7/16	4-25/32	4-7/16	4-25/32	4-7/16	4-51/64	4-7/16	4-51/64	4-1/4	4-51/64
78					4-9/16	4-29/32	4-9/16	4-29/32	4-9/16	4-59/64	4-9/16	4-59/64	4-1/2	4-59/64
80					4-11/16	5-1/32	4-11/16	5-1/32	4-11/16	5-3/64	4-11/16	5-3/64	4-3/4	5-3/64
82					4-13/16	5-5/32	4-13/16	5-5/32	4-13/16	5-11/64	4-13/16	5-11/64	4-7/8	5-11/64
84					4-15/16	5-9/32	4-15/16	5-9/32	4-15/16	5-19/64	4-15/16	5-19/64	5	5-19/64
86													5	5-27/64
88													5-1/8	5-35/64
90													5-1/4	5-43/64
92													5-3/8	5-51/64

P.A. DLA-IS	AIR FORCE - NAVY AERONAUTICAL STANDARD	AN21 THRU AN37
Other Cust ARMY - AV AIR FORCE - 99	BOLT - CLEVIS	
PROCUREMENT SPECIFICATION	SUPERSEDES: FORMER ANA STANDARD AND AIR FORCE AND NAVY STANDARD ISSUES OF AN21 THRU AN36	SHEET 2 OF 3

REVIEWER SYMBOLS:

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Table with columns for DASH NO., AN28, AN29, AN30, AN32, AN34, AN36, AN37. Each column contains sub-columns for GRIP and LENGTH with various fractional values.

Form containing: P.A. DLA-IS, AIR FORCE - NAVY AERONAUTICAL STANDARD, Other Cust ARMY - AV AIR FORCE - 99, BOLT - CLEVIS, AN21 THRU AN37, PROCUREMENT SPECIFICATION, SUPERSEDES: FORMER ANA STANDARD AND AIR FORCE AND NAVY STANDARD ISSUES OF AN21 THRU AN36, SHEET 3 OF 3.

APPROVED 16 NOV 42 REVISED 4 23 DEC 52 5 15 JUN 66 6 29 MAY 69 7 25 MAY 83 8 APR 95 9 20 JUL 95 10 10 NOV 95 11 22 MAR 96