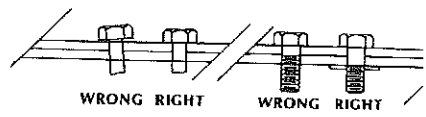


# HARDWARE

BASIC "AN" PART NO.	THREAD	T	RATED STRENGTH (POUNDS)					
			ULTIMATE TENSILE AT ROOT DIA		YIELD TENSILE AT ROOT DIA		SINGLE SHEAR AT FULL DIA	
			STEEL	ALUM ALLOY	STEEL	ALUM ALLOY	STEEL	ALUM ALLOY
AN3	10-32	NF-3A	2,210	1,100	1,690	710	2,125	990
AN4	1/4-28	UNF-3A	4,080	2,030	3,130	1,310	3,680	1,715
AN5	5/16-24	UNF-3A	6,500	3,220	4,980	2,080	5,750	2,685
AN6	3/8-24	UNF-3A	10,100	5,020	7,740	3,240	8,280	3,870
AN7	7/16-20	UNF-3A	13,600	6,750	10,430	4,350	11,250	5,250
AN8	1/2-20	UNF-3A	18,500	9,180	14,190	5,920	14,700	6,850
AN9	9/16-18	UNF-3A	23,600	11,700	18,100	7,550	18,700	8,700
AN10	5/8-18	UNF-3A	30,100	14,900	23,080	9,610	23,000	10,750
AN12	3/4-16	UNF-3A	44,000	21,800	33,730	14,100	33,150	15,500
AN14	7/8-14	UNF-3A	60,000	29,800	46,000	19,200	45,050	21,050
AN16	1-14	NF-3A	80,700	40,000	61,870	25,800	50,980	21,500
AN17	1-12	UNF-3A	80,700	40,000	61,870	25,800	58,900	27,500
AN18	1-1/8-12	UNF-3A	101,800	50,500	78,050	32,600	73,750	34,500
AN20	1-1/4-12	UNF-3A	130,200	64,400	99,820	41,500	91,050	42,500



**A N 3 - 14 A**

Air-Force/  
Navy Standard

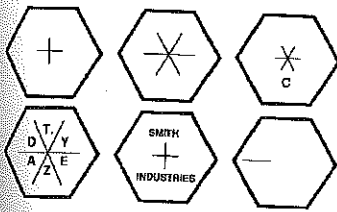
Diameter in  
1/16th of an  
inch

A: Undrilled shank  
No letter: Drilled shank

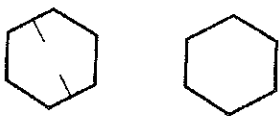
First number: Length in whole inches  
Second or only number: additional 1/8ths inches

**USE**

**do NOT use**



(Corrosion Resistant)



Aluminum bolt:  
Half as strong as steel  
Use only if specified

(No markings on head)  
Non-certified bolt:  
NOT for aircraft use.

**MATCHING BOLTS - NUTS - WASHERS**

SIZE THREAD	BOLT	ELASTIC STOP NUT		METAL Nut	CASTLE NUTS		COTTER Pin	STEEL FLAT WASHERS		
		Thin	Regular		Regular	Shear		Regular	Thin	Wide
10-32	AN3	MS20364-1032	MS20365-1032	AN363-1032	AN310-3	AN320-3	MS24665-132	AN960-10	AN960-10L	AN970-3
1/4-28	AN4	MS20364-428	MS20365-428	AN363-428	AN310-4	AN320-4	MS24665-132	AN960-416	AN960-416L	AN970-4
5/16-24	AN5	MS20364-524	MS20365-524	AN363-524	AN310-5	AN320-5	MS24665-132	AN960-516	AN960-516L	AN970-5
3/8-24	AN6	MS20364-624	MS20365-624	AN363-624	AN310-6	AN320-6	MS24665-283	AN960-616	AN960-616L	AN970-6
7/16-20	AN7	MS20364-720	MS20365-720	AN363-720	AN310-7	AN320-7	MS24665-283	AN960-716	AN960-716L	AN970-7
1/2-20	AN8	MS20364-820	MS20365-820	AN363-820	AN310-8	AN320-8	MS24665-283	AN960-816	AN960-816L	AN970-8

TORQUE VALUES OIL-FREE CADMIUM-PLATED THREADS		
BOLT SIZE	NUTS	
	Tension type MS20365 AN310	Shear-type MS20364 AN320
Bolt PSI	40,000 PSI	24,000 PSI
8-32	12-15	7-9
10-32	20-25	12-15
1/4-28	50-70	30-40
5/16-24	100-140	60-85
3/8-24	160-190	95-110
7/16-20	450-500	270-300
1/2-20	480-690	290-410

Torque values in inch-pounds for tightening nuts.  
To obtain values in foot-pounds,  
divide inch-pounds by 12.

Bolt heads **UP & FORWARD** when possible.  
NO elastic stop nuts in engine compartment.

