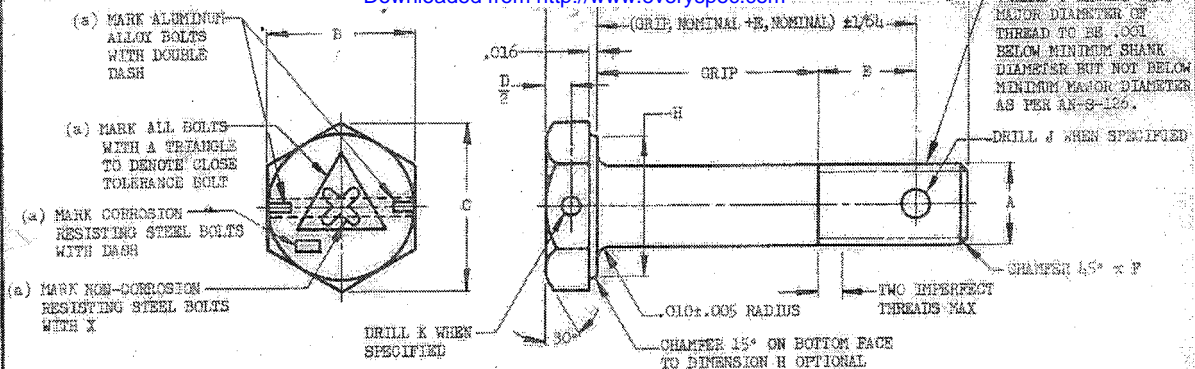
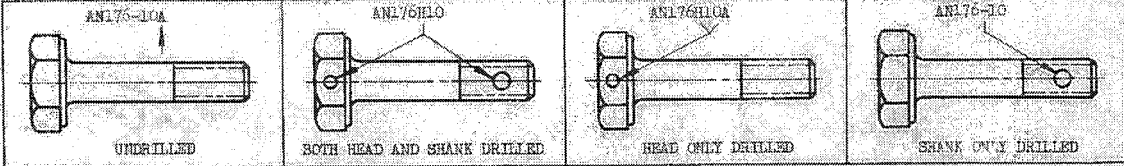


NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definite Government contract, the Government assumes no liability for any infringement of any patent or other right that may be claimed by a third party.



BASIC PART NUMBER	THREAD T	A DIA	B	C REF	D ±.016	E REF	F ±.016	H ±.016 DIA	J	K	RATED STRENGTH (POUNDS)					
											ULTIMATE TENSILE AT ROOT DIA		YIELD TENSILE AT ROOT DIA		SINGLE SHEAR AT FULL DIA	
											STEEL	AL ALLOY	STEEL	AL ALLOY	STEEL	AL ALLOY
AN173	M10-32 NF-3	.1894 <sup>+.0000</sup> <sub>-.0005</sub>	.375 <sup>+.0002</sup> <sub>-.010</sub>	.430	.125	17/64	.031	.375	.070	.046	2 210	1 100	1 690	710	2 124	990
AN174	1/4-28 NF-3	.2492 <sup>+.0000</sup> <sub>-.0005</sub>	.438 <sup>+.0002</sup> <sub>-.010</sub>	.510	.356	5/16	.031	.438	.076	.046	4 090	2 030	3 130	1 310	3 680	1 715
AN175	5/16-24 NF-3	.3117 <sup>+.0000</sup> <sub>-.0005</sub>	.500 <sup>+.0002</sup> <sub>-.010</sub>	.580	.488	23/64	.047	.500	.076	.070	6 500	3 200	4 960	2 080	5 750	2 685
AN176	3/8-24 NF-3	.3742 <sup>+.0000</sup> <sub>-.0005</sub>	.563 <sup>+.0002</sup> <sub>-.010</sub>	.650	.219	7/16	.047	.563	.106	.070	10 100	5 020	7 240	3 240	8 260	3 870
AN177	7/16-20 NF-3	.4367 <sup>+.0000</sup> <sub>-.0005</sub>	.625 <sup>+.0002</sup> <sub>-.010</sub>	.720	.250	31/64	.047	.625	.106	.070	13 600	6 750	10 430	4 350	11 250	5 290
AN178	1/2-20 NF-3	.4991 <sup>+.0000</sup> <sub>-.0005</sub>	.750 <sup>+.0002</sup> <sub>-.010</sub>	.870	.281	39/64	.047	.750	.106	.070	18 500	9 180	14 190	5 820	11 700	6 850
AN179	9/16-18 NF-3	.5616 <sup>+.0000</sup> <sub>-.0005</sub>	.875 <sup>+.0002</sup> <sub>-.010</sub>	1.020	.312	21/32	.052	.875	.141	.070	23 600	11 700	18 100	7 550	18 700	8 700
AN180	5/8-18 NF-3	.6240 <sup>+.0000</sup> <sub>-.0006</sub>	.938 <sup>+.0002</sup> <sub>-.010</sub>	1.090	.344	47/64	.062	.938	.141	.070	30 100	14 900	23 000	9 610	23 000	10 750
AN182	3/4-16 NF-3	.7489 <sup>+.0000</sup> <sub>-.0007</sub>	1.063 <sup>+.0003</sup> <sub>-.010</sub>	1.230	.406	7/8	.062	1.063	.141	.070	44 000	21 600	33 730	14 100	33 150	15 500
AN184	7/8-14 NF-3	.8731 <sup>+.0000</sup> <sub>-.0008</sub>	1.250 <sup>+.0003</sup> <sub>-.010</sub>	1.440	.469	63/64	.078	1.250	.141	.070	60 000	29 800	46 000	19 200	45 050	21 050
AN186	1-14 NF-3	.9985 <sup>+.0000</sup> <sub>-.0016</sub>	1.438 <sup>+.0003</sup> <sub>-.010</sub>	1.660	.531	1-3/32	.078	1.438	.141	.070	80 700	40 000	61 870	25 800	58 900	27 500

(a) MARKING MAY BE EITHER RAISED OR RECESSED BUT SHALL NOT EXCEED .010 INCH IN HEIGHT OR DEPTH.  
MATERIAL: NON-CORROSION RESISTING STEEL, CORROSION RESISTING STEEL OR ALUMINUM ALLOY. SEE PROCUREMENT SPECIFICATION.  
FINISH: SEE PROCUREMENT SPECIFICATION, EXCEPT AS NOTED. AFTER GRINDING CALCIUM PLATED BOLTS, SHANKS SHALL BE COATED WITH COMPOUND IN ACCORDANCE WITH SPECIFICATION AN-C-82.  
ADD C BEFORE DASH NUMBER FOR CORROSION RESISTING STEEL BOLT.  
ADD DD BEFORE DASH NUMBER FOR ALUMINUM ALLOY BOLT.  
ADD A AFTER DASH NUMBER FOR UNDRILLED BOLT. SEE ILLUSTRATION.  
ADD H BEFORE DASH NUMBER FOR BOLT WITH DRILLED HEAD AND SHANK. SEE ILLUSTRATION.  
ADD H BEFORE DASH NUMBER AND A AFTER DASH NUMBER FOR BOLT WITH DRILLED HEAD ONLY. SEE ILLUSTRATION.  
EXAMPLES OF PART NUMBERS:  
AN176-10 = 3/8 NON-CORROSION RESISTING STEEL BOLT 1-5/8" LONG, 7/16 GRIP WITH DRILLED SHANK ONLY. SEE ILLUSTRATION.  
AN176C10 = 3/8 CORROSION RESISTING STEEL BOLT 1-5/8" LONG, 7/16 GRIP WITH DRILLED SHANK ONLY. SEE ILLUSTRATION.  
AN176DD10 = 3/8 ALUMINUM ALLOY BOLT 1-5/8" LONG, 7/16 GRIP WITH DRILLED SHANK ONLY. SEE ILLUSTRATION.  
AN176DC10A = 3/8 ALUMINUM ALLOY BOLT 1-5/8" LONG, 7/16 GRIP, UNDRILLED SHANK AND HEAD. SEE ILLUSTRATION.  
AN176DDH10 = 3/8 ALUMINUM ALLOY BOLT 1-5/8" LONG, 7/16 GRIP WITH DRILLED HEAD AND SHANK. SEE ILLUSTRATION.  
AN176DDH10A = 3/8 ALUMINUM ALLOY BOLT 1-5/8" LONG, 7/16 GRIP WITH DRILLED HEAD ONLY. SEE ILLUSTRATION.



### ILLUSTRATION OF DRILLED AND UNDERMINED BOLTS AND PART NUMBERS

REMOVE BURRS AND SHARP EDGES.  
DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm 0.010$ ; ANGLES  $\pm 1^\circ$ .  
DRILLS IN ACCORDANCE WITH ANSI B39.1.

PROCUREMENT SPECIFICATION	AIR FORCE-NAVY AERONAUTICAL STANDARD	AN173 THRU AN186
AH-B-3	BOLT-AIRCRAFT, CLOSE TOLERANCE	
		SHEET 1 OF 3 SHEETS

**As Fever**      **As Fever**      **As Fever**

**1923:** This disease was reported by joint action of the **1923** and **1924** **1925** **1926** **1927** **1928** **1929** **1930** **1931** **1932** **1933** **1934** **1935** **1936** **1937** **1938** **1939** **1940** **1941** **1942** **1943** **1944** **1945** **1946** **1947** **1948** **1949** **1950** **1951** **1952** **1953** **1954** **1955** **1956** **1957** **1958** **1959** **1960** **1961** **1962** **1963** **1964** **1965** **1966** **1967** **1968** **1969** **1970** **1971** **1972** **1973** **1974** **1975** **1976** **1977** **1978** **1979** **1980** **1981** **1982** **1983** **1984** **1985** **1986** **1987** **1988** **1989** **1990** **1991** **1992** **1993** **1994** **1995** **1996** **1997** **1998** **1999** **2000** **2001** **2002** **2003** **2004** **2005** **2006** **2007** **2008** **2009** **2010** **2011** **2012** **2013** **2014** **2015** **2016** **2017** **2018** **2019** **2020** **2021** **2022** **2023** **2024** **2025** **2026** **2027** **2028** **2029** **2030** **2031** **2032** **2033** **2034** **2035** **2036** **2037** **2038** **2039** **2040** **2041** **2042** **2043** **2044** **2045** **2046** **2047** **2048** **2049** **2050** **2051** **2052** **2053** **2054** **2055** **2056** **2057** **2058** **2059** **2060** **2061** **2062** **2063** **2064** **2065** **2066** **2067** **2068** **2069** **2070** **2071** **2072** **2073** **2074** **2075** **2076** **2077** **2078** **2079** **2080** **2081** **2082** **2083** **2084** **2085** **2086** **2087** **2088** **2089** **2090** **2091** **2092** **2093** **2094** **2095** **2096** **2097** **2098** **2099** **2100** **2101** **2102** **2103** **2104** **2105** **2106** **2107** **2108** **2109** **2110** **2111** **2112** **2113** **2114** **2115** **2116** **2117** **2118** **2119** **2120** **2121** **2122** **2123** **2124** **2125** **2126** **2127** **2128** **2129** **2130** **2131** **2132** **2133** **2134** **2135** **2136** **2137** **2138** **2139** **2140** **2141** **2142** **2143** **2144** **2145** **2146** **2147** **2148** **2149** **2150** **2151** **2152** **2153** **2154** **2155** **2156** **2157** **2158** **2159** **2160** **2161** **2162** **2163** **2164** **2165** **2166** **2167** **2168** **2169** **2170** **2171** **2172** **2173** **2174** **2175** **2176** **2177** **2178** **2179** **2180** **2181** **2182** **2183** **2184** **2185** **2186** **2187** **2188** **2189** **2190** **2191** **2192** **2193** **2194** **2195** **2196** **2197** **2198** **2199** **2200** **2201** **2202** **2203** **2204** **2205** **2206** **2207** **2208** **2209** **2210** **2211** **2212** **2213** **2214** **2215** **2216** **2217** **2218** **2219** **2220** **2221** **2222** **2223** **2224** **2225** **2226** **2227** **2228** **2229** **2230** **2231** **2232** **2233** **2234** **2235** **2236** **2237** **2238** **2239** **2240** **2241** **2242** **2243** **2244** **2245** **2246** **2247** **2248** **2249** **2250** **2251** **2252** **2253** **2254** **2255** **2256** **2257** **2258** **2259** **2260** **2261** **2262** **2263** **2264** **2265** **2266** **2267** **2268** **2269** **2270** **2271** **2272** **2273** **2274** **2275** **2276** **2277** **2278** **2279** **2280** **2281** **2282** **2283** **2284** **2285** **2286** **2287** **2288** **2289** **2290** **2291** **2292** **2293** **2294** **2295** **2296** **2297** **2298** **2299** **2300** **2301** **2302** **2303** **2304** **2305** **2306** **2307** **2308** **2309** **2310** **2311** **2312** **2313** **2314** **2315** **2316** **2317** **2318** **2319** **2320** **2321** **2322** **2323** **2324** **2325** **2326** **2**

TABLE NO.	ANL73		ANL74		ANL75		ANL76		ANL77		ANL78		ANL79	
	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64
3	1/16	15/32	1/16	15/32										
4	1/8	17/32	1/16	17/32	1/16	19/32								
5	1/4	21/32	3/16	21/32	3/16	23/32	1/16	45/64	1/16	23/32				
6	3/8	25/32	5/16	25/32	5/16	27/32	3/16	53/64	3/16	27/32	1/16	27/32	1/16	31/32
7	1/2	29/32	7/16	29/32	7/16	31/32	5/16	61/64	5/16	31/32	3/16	31/32	1/8	1- 1/32
10	5/8	1- 1/32	9/16	1- 1/32	9/16	1- 3/32	7/16	1- 5/64	7/16	1- 3/32	5/16	1- 3/32	1/4	1- 5/32
11	3/4	1- 5/32	11/16	1- 5/32	11/16	1- 7/32	9/16	1-13/64	9/16	1- 7/32	7/16	1- 7/32	3/8	1- 9/32
12	7/8	1- 9/32	13/16	1- 9/32	13/16	1-11/32	11/16	1-21/64	11/16	1-11/32	9/16	1-11/32	1/2	1-13/32
13	1	1-13/32	15/16	1-13/32	15/16	1-15/32	13/16	1-29/64	13/16	1-15/32	11/16	1-25/32	5/8	1-17/32
14	1-1/8	1-17/32	1- 1/16	1-17/32	1- 1/16	1-19/32	15/16	1-31/64	15/16	1-19/32	13/16	1-19/32	3/4	1-21/32
15	1-1/4	1-21/32	1- 3/16	1-21/32	1- 3/16	1-23/32	1- 1/16	1-45/64	1- 1/16	1-23/32	15/16	1-23/32	7/8	1-25/32
16	1-3/8	1-25/32	1- 5/16	1-25/32	1- 5/16	1-27/32	1- 3/16	1-53/64	1- 3/16	1-27/32	1- 1/16	1-27/32	1	1-29/32
17	1-1/2	1-29/32	1- 7/16	1-29/32	1- 7/16	1-31/32	1- 5/16	1-61/64	1- 5/16	1-31/32	1- 3/16	1-31/32	1-1/8	2- 1/32
20	1-5/8	2- 1/32	1- 9/16	2- 1/32	1- 9/16	2- 3/32	1- 7/16	2- 5/64	1- 7/16	2- 3/32	1- 5/16	2- 3/32	1-1/4	2- 5/32
21	1-3/4	2- 5/32	1-11/16	2- 5/32	1-11/16	2- 7/32	1- 9/16	2-13/64	1- 9/16	2- 7/32	1- 7/16	2- 7/32	1-3/8	2- 9/32
22	2-1/8	2- 9/32	1-13/16	2- 9/32	1-13/16	2-11/32	1-11/16	2-21/64	1-11/16	2-11/32	1- 9/16	2-11/32	1-1/2	2-13/32
23	2	2-13/32	1-15/16	2-13/32	1-15/16	2-15/32	1-13/16	2-29/64	1-13/16	2-15/32	1-11/16	2-15/32	1-5/8	2-17/32
24	2-1/8	2-17/32	2- 1/16	2-17/32	2- 1/16	2-19/32	1-15/16	2-31/64	1-15/16	2-19/32	1-11/16	2-19/32	1-3/4	2-21/32
25	2-1/4	2-21/32	2- 3/16	2-21/32	2- 3/16	2-23/32	2- 1/16	2-45/64	2- 1/16	2-23/32	1-15/16	2-23/32	1-7/8	2-25/32
26	2-3/8	2-25/32	2- 5/16	2-25/32	2- 5/16	2-27/32	2- 3/16	2-53/64	2- 3/16	2-27/32	2- 1/16	2-27/32	2	2-29/32
27	2-1/2	2-29/32	2- 7/16	2-29/32	2- 7/16	2-31/32	2- 5/16	2-61/64	2- 5/16	2-31/32	2- 3/16	2-31/32	2-1/8	3- 1/32
30	2-5/8	3- 1/32	2- 9/16	3- 1/32	2- 9/16	3- 3/32	2- 7/16	3- 5/64	2- 7/16	3- 3/32	2- 5/16	3- 3/32	2-1/4	3- 5/32
31	2-3/4	3- 5/32	2-11/16	3- 5/32	2-11/16	3- 7/32	2- 9/16	3-13/64	2- 9/16	3- 7/32	2- 7/16	3- 7/32	2-3/8	3- 9/32
32	2-7/8	3- 9/32	2-13/16	3- 9/32	2-13/16	3-11/32	2-11/16	3-21/64	2-11/16	3-11/32	2- 9/16	3-11/32	2-1/2	3-13/32
33	3	3-13/32	2-15/16	3-13/32	2-15/16	3-15/32	2-13/16	3-29/64	2-13/16	3-15/32	2-11/16	3-15/32	2-5/8	3-17/32
34	3-1/8	3-17/32	3- 1/16	3-17/32	3- 1/16	3-19/32	2-15/16	3-37/64	2-15/16	3-19/32	2-13/16	3-19/32	2-3/4	3-21/32
35	3-1/4	3-21/32	3- 3/16	3-21/32	3- 3/16	3-23/32	3- 1/16	3-45/64	3- 1/16	3-23/32	2-15/16	3-23/32	2-7/8	3-25/32
36	3-3/8	3-25/32	3- 5/16	3-25/32	3- 5/16	3-27/32	3- 3/16	3-53/64	3- 3/16	3-27/32	3- 1/16	3-27/32	3	3-29/32
37	3-1/2	3-29/32	3- 7/16	3-29/32	3- 7/16	3-31/32	3- 5/16	3-61/64	3- 5/16	3-31/32	3- 3/16	3-31/32	3-1/8	4- 1/32
40	3-5/8	4- 1/32	3- 9/16	4- 1/32	3- 9/16	4- 3/32	3- 7/16	4- 5/64	3- 7/16	4- 3/32	3- 5/16	4- 3/32	3-1/4	4- 5/32
41	3-3/4	4- 5/32	3-11/16	4- 5/32	3-11/16	4- 7/32	3- 9/16	4-13/64	3- 9/16	4- 7/32	3- 7/16	4- 7/32	3-3/8	4- 9/32
42	3-7/8	4- 9/32	3-13/16	4- 9/32	3-13/16	4-11/32	3-11/16	4-21/64	3-11/16	4-11/32	3- 9/16	4-11/32	3-1/2	4-13/32
43	4	4-13/32	3-15/16	4-13/32	3-15/16	4-15/32	3-13/16	4-29/64	3-13/16	4-15/32	3-11/16	4-15/32	3-5/8	4-17/32
44	4-1/8	4-17/32	4- 1/16	4-17/32	4- 1/16	4-19/32	3-15/16	4-37/64	3-15/16	4-19/32	3-13/16	4-19/32	3-3/4	4-21/32
45	4-1/4	4-21/32	4- 3/16	4-21/32	4- 3/16	4-23/32	4- 1/16	4-45/64	4- 1/16	4-23/32	3-15/16	4-23/32	3-7/8	4-25/32
46	4-3/8	4-25/32	4- 5/16	4-25/32	4- 5/16	4-27/32	4- 3/16	4-53/64	4- 3/16	4-27/32	4- 1/16	4-27/32	4	4-29/32
47	4-1/2	4-29/32	4- 7/16	4-29/32	4- 7/16	4-31/32	4- 5/16	4-61/64	4- 5/16	4-31/32	4- 3/16	4-31/32	4-1/8	5- 1/32
50	4-5/8	5- 1/32	4- 9/16	5- 1/32	4- 9/16	5- 3/32	4- 7/16	5- 5/64	4- 7/16	5- 3/32	4- 5/16	5- 3/32	4-1/4	5- 5/32
51	4-3/4	5- 5/32	4-11/16	5- 5/32	4-11/16	5- 7/32	4- 9/16	5-13/64	4- 9/16	5- 7/32	4- 7/16	5- 7/32	4-3/8	5- 9/32
52	4-7/8	5- 9/32	4-13/16	5- 9/32	4-13/16	5-11/32	4-11/16	5-21/64	4-11/16	5-11/32	4- 9/16	5-11/32	4-1/2	5-13/32
53	5	5-13/32	4-15/16	5-13/32	4-15/16	5-15/32	4-13/16	5-29/64	4-13/16	5-15/32	4-11/16	5-15/32	4-5/8	5-17/32
54	5-1/8	5-17/32	5- 1/16	5-17/32	5- 1/16	5-19/32	4-15/16	5-37/64	4-15/16	5-19/32	4-13/16	5-19/32	4-3/4	5-21/32
55	5-1/4	5-21/32	5- 3/16	5-21/32	5- 3/16	5-23/32	5- 1/16	5-45/64	5- 1/16	5-23/32	4-15/16	5-23/32	4-7/8	5-25/32
56	5-3/8	5-25/32	5- 5/16	5-25/32	5- 5/16	5-27/32	5- 3/16	5-53/64	5- 3/16	5-27/32	5- 1/16	5-27/32	5	5-29/32
57	5-1/2	5-29/32	5- 7/16	5-29/32	5- 7/16	5-31/32	5- 5/16	5-61/64	5- 5/16	5-31/32	5- 3/16	5-31/32	5-1/8	6- 1/32
60	5-5/8	6- 1/32	5- 9/16	6- 1/32	5- 9/16	6- 3/32	5- 7/16	6- 5/64	5- 7/16	6- 3/32	5- 5/16	6- 3/32	5-1/4	6- 5/32
61	5-3/4	6- 5/32	5-11/16	6- 5/32	5-11/16	6- 7/32	5- 9/16	6-13/64	5- 9/16	6- 7/32	5- 7/16	6- 7/32	5-3/8	6- 9/32
62	5-7/8	6- 9/32	5-13/16	6- 9/32	5-13/16	6-11/32	5-11/16	6-21/64	5-11/16	6-11/32	5- 9/16	6-11/32	5-1/2	6-13/32
63	6	6-13/32	5-15/16	6-13/32	5-15/16	6-15/32	5-13/16	6-29/64	5-13/16	6-15/32	5-11/16	6-15/32	5-5/8	6-17/32
64	6-1/8	6-17/32	6- 1/16	6-17/32	6- 1/16	6-19/32	5-15/16	6-37/64	5-15/16	6-19/32	5-13/16	6-19/32	5-3/4	6-21/32
65	6-1/4	6-21/32	6- 3/16	6-21/32	6- 3/16	6-23/32	6- 1/16	6-45/64	6- 1/16	6-23/32	5-15/16	6-23/32	5-7/8	6-25/32
66	6-3/8	6-25/32	6- 5/16	6-25/32	6- 5/16	6-27/32	6- 3/16	6-53/64	6- 3/16	6-27/32	6- 1/16	6-27/32	6	6-29/32
67	6-1/2	6-29/32	6- 7/16	6-29/32	6- 7/16	6-31/32	6- 5/16	6-61/64	6- 5/16	6-31/32	6- 3/16	6-31/32	6-1/8	7- 1/32
70	6-5/8	7- 1/32	6- 9/16	7- 1/32	6- 9/16	7- 3/32	6- 7/16	7- 5/64	6- 7/16	7- 3/32	6- 5/16	7- 3/32	6-1/4	7- 5/32
71	6-3/4	7- 5/32	6-11/16	7- 5/32	6-11/16	7- 7/32	6- 9/16	7-13/64	6- 9/16	7- 7/32	6- 7/16	7- 7/32	6-3/8	7- 9/32
72	6-7/8	7- 9/32	6-13/16	7- 9/32	6-13/16	7-11/32	6-11/16	7-21/64	6-11/16	7-11/32	6- 9/16	7-11/32	6-1/2	7-13/32
73	7	7-13/32	6-15/16	7-13/32	6-15/16	7-15/32	6-13/16	7-29/64	6-13/16	7-15/32	6-11/16	7-15/32	6-5/8	7-17/32
74	7-1/8	7-17/32	7- 1/16	7-17/32	7- 1/16	7-19/32	6-15/16	7-37/64	6-15/16	7-19/32	6-13/16	7-19/32	6-3/4	7-21/32
75	7-1/4	7-21/32	7- 3/16	7-21/32	7- 3/16	7-23/32	7- 1/16	7-45/64	7- 1/16	7-23/32	6-15/16	7-23/32	6-7/8	7-25/32
76	7-3/8	7-25/32	7- 5/16	7-25/32	7- 5/16	7-27/32	7- 3/16	7-53/64	7- 3/16	7-27/32	7- 1/16	7-27/32	7	7-29/32
77	7-1/2	7-29/32	7- 7/16	7-29/32	7- 7/16	7-31/32	7- 5/16	7-61/64	7- 5/16	7-31/32	7- 3/16	7-31/32	7-1/8	8- 1/32
80	7-5/8	8- 1/32	7- 9/16	8- 1/32	7- 9/16	8- 3/32	7- 7/16	8- 5/64	7- 7/16	8- 3/32	7- 5/16	8- 3/32	7-1/4	8- 5/32
81					7-11/16	8- 7/32					7- 7/16	8- 7/32		
82											7- 9/16	8-11/32		
83											7-11/16	8-15/32		
84											7-13/16	8-19/32		
85							8- 1/16	8-45/64			7-15/16	8-23/32		
86											8- 1/16	8-27/32		
87											8- 3/16	8-31/32		

NOTE: This drawing was approved by Joint action of the Army and Navy Departments on the 15th day of May 1952. It is hereby approved for use by the Army and Navy Departments. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared.

NOTE: This drawing was approved by Joint action of the Army and Navy Departments on the 15th day of May 1952. It is hereby approved for use by the Army and Navy Departments. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared. It is the policy of the Army and Navy Departments that this drawing shall not be used for any other purpose than that for which it was prepared.

BOLT NO.	AN180		AN182		AN184		AN186	
	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64	GRIP ±1/64	LENGTH +1/32 -1/64
7	1/16	1- 1/64						
10	3/16	1- 9/64	1/16	1- 5/32				
11	5/16	1-17/64	3/16	1- 9/32	1/16	1- 5/16		
12	7/16	1-25/64	5/16	1-13/32	3/16	1- 7/16	1/8	1-1/2
13	9/16	1-33/64	7/16	1-27/32	5/16	1- 9/16	1/4	1-5/8
14	11/16	1-41/64	9/16	1-21/32	7/16	1-11/16	3/8	1-3/4
15	13/16	1-49/64	11/16	1-25/32	9/16	1-13/16	1/2	1-7/8
16	15/16	1-57/64	13/16	1-29/32	11/16	1-15/16	5/8	2
17	1- 1/16	2- 1/64	15/16	2- 1/32	13/16	2- 1/16	3/4	2-1/8
20	1- 3/16	2- 9/64	1- 1/16	2- 5/32	15/16	2- 3/16	7/8	2-1/4
21	1- 5/16	2-17/64	1- 3/16	2- 9/32	1- 1/16	2- 5/16	1	2-3/8
22	1- 7/16	2-25/64	1- 5/16	2-13/32	1- 3/16	2- 7/16	1-1/8	2-1/2
23	1- 9/16	2-33/64	1- 7/16	2-17/32	1- 5/16	2- 9/16	1-1/4	2-5/8
24	1-11/16	2-41/64	1- 9/16	2-21/32	1- 7/16	2-11/16	1-3/8	2-3/4
25	1-13/16	2-49/64	1-11/16	2-25/32	1- 9/16	2-13/16	1-1/2	2-7/8
26	1-15/16	2-57/64	1-13/16	2-29/32	1-11/16	2-15/16	1-5/8	3
27	2- 1/16	3- 1/64	1-15/16	3- 1/32	1-13/16	3- 1/16	1-3/4	3-1/8
30	2- 3/16	3- 9/64	2- 1/16	3- 5/32	1-15/16	3- 3/16	1-7/8	3-1/4
31	2- 5/16	3-17/64	2- 3/16	3- 9/32	2- 1/16	3- 5/16	2	3-3/8
32	2- 7/16	3-25/64	2- 5/16	3-13/32	2- 3/16	3- 7/16	2-1/8	3-1/2
33	2- 9/16	3-33/64	2- 7/16	3-17/32	2- 5/16	3- 9/16	2-1/4	3-5/8
34	2-11/16	3-41/64	2- 9/16	3-21/32	2- 7/16	3-11/16	2-3/8	3-3/4
35	2-13/16	3-49/64	2-11/16	3-25/32	2- 9/16	3-13/16	2-1/2	3-7/8
36	2-15/16	3-57/64	2-13/16	3-29/32	2-11/16	3-15/16	2-5/8	4
37	3- 1/16	4- 1/64	2-15/16	4- 1/32	2-13/16	4- 1/16	2-3/4	4-1/8
40	3- 3/16	4- 9/64	3- 1/16	4- 5/32	2-15/16	4- 3/16	2-7/8	4-1/4
41	3- 5/16	4-17/64	3- 3/16	4- 9/32	3- 1/16	4- 5/16	3	4-3/8
42	3- 7/16	4-25/64	3- 5/16	4-13/32	3- 3/16	4- 7/16	3-1/8	4-1/2
43	3- 9/16	4-33/64	3- 7/16	4-17/32	3- 5/16	4- 9/16	3-1/4	4-5/8
44	3-11/16	4-41/64	3- 9/16	4-21/32	3- 7/16	4-11/16	3-3/8	4-3/4
45	3-13/16	4-49/64	3-11/16	4-25/32	3- 9/16	4-13/16	3-1/2	4-7/8
46	3-15/16	4-57/64	3-13/16	4-29/32	3-11/16	4-15/16	3-5/8	5
47	4- 1/16	5- 1/64	3-15/16	5- 1/32	3-13/16	5- 1/16	3-3/4	5-1/8
50	4- 3/16	5- 9/64	4- 1/16	5- 5/32	3-15/16	5- 3/16	3-7/8	5-1/4
51	4- 5/16	5-17/64	4- 3/16	5- 9/32	4- 1/16	5- 5/16	4	5-3/8
52	4- 7/16	5-25/64	4- 5/16	5-13/32	4- 3/16	5- 7/16	4-1/8	5-1/2
53	4- 9/16	5-33/64	4- 7/16	5-17/32	4- 5/16	5- 9/16	4-1/4	5-5/8
54	4-11/16	5-41/64	4- 9/16	5-21/32	4- 7/16	5-11/16	4-3/8	5-3/4
55	4-13/16	5-49/64	4-11/16	5-25/32	4- 9/16	5-13/16	4-1/2	5-7/8
56	4-15/16	5-57/64	4-13/16	5-29/32	4-11/16	5-15/16	4-5/8	6
57	5- 1/16	6- 1/64	4-15/16	6- 1/32	4-13/16	6- 1/16	4-3/4	6-1/8
60	5- 3/16	6- 9/64	5- 1/16	6- 5/32	4-15/16	6- 3/16	4-7/8	6-1/4
61	5- 5/16	6-17/64	5- 3/16	6- 9/32	5- 1/16	6- 5/16	5	6-3/8
62	5- 7/16	6-25/64	5- 5/16	6-13/32	5- 3/16	6- 7/16	5-1/8	6-1/2
63	5- 9/16	6-33/64	5- 7/16	6-17/32	5- 5/16	6- 9/16	5-3/8	6-5/8
64	5-11/16	6-41/64	5- 9/16	6-21/32	5- 7/16	6-11/16	5-3/4	6-3/4
65	5-13/16	6-49/64	5-11/16	6-25/32	5- 9/16	6-13/16	5-1/2	6-7/8
66	5-15/16	6-57/64	5-13/16	6-29/32	5-11/16	6-15/16	5-5/8	7
67	6- 1/16	7- 1/64	5-15/16	7- 1/32	5-13/16	7- 1/16	5-3/4	7-1/8
70	6- 3/16	7- 9/64	6- 1/16	7- 5/32	5-15/16	7- 3/16	5-7/8	7-1/4
71	6- 5/16	7-17/64	6- 3/16	7- 9/32	6- 1/16	7- 5/16	6	7-3/8
72	6- 7/16	7-25/64	6- 5/16	7-13/32	6- 3/16	7- 7/16	6-1/8	7-1/2
73	6- 9/16	7-33/64	6- 7/16	7-17/32	6- 5/16	7- 9/16	6-1/4	7-5/8
74	6-11/16	7-41/64	6- 9/16	7-21/32	6- 7/16	7-11/16	6-3/8	7-3/4
75	6-13/16	7-49/64	6-11/16	7-25/32	6- 9/16	7-13/16	6-1/2	7-7/8
76	6-15/16	7-57/64	6-13/16	7-29/32	6-11/16	7-15/16	6-5/8	8
77	7- 1/16	8- 1/64	6-15/16	8- 1/32	6-13/16	8- 1/16	6-3/4	8-1/8
80	7- 3/16	8- 9/64	7- 1/16	8- 5/32	6-15/16	8- 3/16	6-7/8	8-1/4
81							7	8-3/8
82							7-1/8	8-1/2

- 1 (a) MARKING MAY BE EITHER RAISED OR DEPRESSED.  
THE HEIGHT OR DEPTH OF THE MARKINGS SHALL NOT EXCEED THE FOLLOWING VALUES:  
.025 INCH FOR 9/16 DIAMETER BOLTS AND SMALLER;  
.030 INCH FOR 5/8 DIAMETER BOLTS AND LARGER.  
HEAD MARKING MAY INCLUDE MANUFACTURER'S MARKINGS.
- 1 (b) GRIP LENGTHS OF BOLTS SHALL BE MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK. COMPLETE THREADS SHALL BEGIN WITHIN TWO THREAD PITCH MAXIMUM. TWO THREAD PITCH MAXIMUM MAY CONSIST OF INCOMPLETE THREAD OR EXTRUSION ANGLE.
- 8 (c) CORROSION RESISTING STEEL BOLTS AND ALUMINUM ALLOY BOLTS INACTIVE FOR DESIGN AFTER 24 MARCH 1952.
- 8 FOR DEFINITION AND APPLICATION OF DRAWING STATUS NOTES, SEE AIA BULLETIN NO. 337.

PROCUREMENT  
SPECIFICATION

AIR FORCE-NAVY AERONAUTICAL STANDARD

AAH72 THRU AN186

NIL-B-6012

BOLT-

**NOTICE.**—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government is the source of such data shall not be used in advertising, promotion, or other sales or other purposes, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

**NOTE.**—This drawing was approved by joint action of the Air Force and Navy Departments as the Air Force-Navy standard for this product. This drawing supersedes all antecedent standard drawings for the same product and shall be used for the manufacture of parts and supplies, or for use in any design, not later than six months after the latest date of approval shown.

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	AL ALLOY	STEEL	AL ALLOY	STEEL	AL ALLOY
AN173	NO. 10-32 NF-3A	2 210	1 100	1 690	710	2 125	990
AN174	1/4 -28 UNF-3A	4 030	2 030	3 130	1 310	3 680	1 715
AN175	5/16-24 UNF-3A	6 500	3 220	4 950	2 050	5 750	2 685
AN176	3/8 -24 UNF-3A	10 100	5 020	7 740	3 240	8 280	3 870
AN177	7/16-20 UNF-3A	13 600	6 750	10 430	4 350	11 250	5 250
AN178	1/2 -20 UNF-3A	18 500	9 180	14 190	5 920	14 700	6 850
AN179	9/16-18 UNF-3A	23 600	11 700	18 100	7 550	18 700	8 700
AN180	5/8 -13 UNF-3A	30 100	14 900	23 080	9 610	23 000	10 750
AN182	3/4 -16 UNF-3A	44 000	21 800	33 730	14 100	33 150	15 500
AN184	7/8 -14 UNF-3A	60 000	29 000	46 000	19 200	45 050	21 050
AN186	1 -14 NF-3A	80 700	40 000	61 870	25 800	58 900	27 500

PROCUREMENT  
SPECIFICATION  
MIL-B-6812

# AIR FORCE-NAVY AERONAUTICAL STANDARD

BOLT -

AN173 THRU AN186

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APPROVED 24 MAR 52 REVISED