



Fastener Torque Chart

Bolt Diameter	Coarse Thread						Fine Thread					
	Grade 5			Grade 8			Grade 5			Grade 8		
	Coated	Lubricated	Dry	Coated	Lubricated	Dry	Coated	Lubricated	Dry	Coated	Lubricated	Dry
1/4"	5.5	6.3	8.5	7.8	8.9	11.9	6.3	7.2	9.7	8.9	10.2	13.6
5/16"	11.3	13.1	17.4	16	18.4	24.6	12.5	14.5	19.3	17.7	20.4	27.2
3/8"	20.1	23.2	30.9	28.3	32.7	43.6	22.7	26.2	35	32.1	37.1	49.4
7/16"	32.1	37.1	49.4	45.3	52.3	69.8	35.9	41.4	55.2	50.6	58.4	77.9
1/2"	49	56.5	75.4	69.2	79.8	106.4	55.2	63.7	85	78	90	120
9/16"	70.7	81.6	108.7	99.8	115.1	153.5	78.9	91	121.3	111.3	128.4	171.3
5/8"	97.6	112.6	150.1	137.7	158.9	211.9	110.5	127.5	170	156	180	240
3/4"	173	200	267	245	282	376	193	223	297	273	315	420
7/8"	279	322	429	394	455	606	308	355	474	435	502	669
1"	418	483	644	591	681	909	470	542	722	663	765	1020
1-1/8"	516	596	794	837	966	1288	579	668	890	939	1083	1444
1-1/4"	728	840	1121	1181	1363	1817	806	930	1241	1308	1509	2012
1-3/8"	955	1102	1469	1548	1786	2382	1087	1254	1672	1763	2034	2712
1-1/2"	1267	1462	1950	2055	2371	3162	1426	1645	2194	2312	2668	3557

All measurements are in ft/lb

Metric Bolts	Coarse Thread						Fine Thread					
	Class 8.8			Class 10.9			Class 8.8			Class 10.9		
	Coated	Lubricated	Dry	Coated	Lubricated	Dry	Coated	Lubricated	Dry	Coated	Lubricated	Dry
5 mm	3	3.4	4.6	4.2	4.9	6.5	3.4	3.9	5.2	4.8	5.6	7.4
6 mm	5	5.8	7.7	7.2	8.3	11.1	5.5	6.4	8.5	7.9	9.1	12.1
8 mm	12.2	14.1	18.8	17.5	20.2	26.9	13.1	15.1	20.1	18.7	21.6	28.8
10 mm	24.2	27.9	37.2	34.6	39.9	53.3	25.5	29.5	39.3	36.5	42.1	56.2
12 mm	42.2	48.7	64.9	60.4	69.7	92.9	44.1	50.9	67.9	63.1	72.8	97.1
14 mm	67.2	77.5	103	96.1	222	148	72.7	83.9	111.9	104	120	160
16 mm	105	121	161	150	173	231	111.6	128.8	171.7	160	184	246
18 mm	149	172	229	206	238	317	168	194	258	232	268	357
20 mm	211	244	325	292	337	450	234	270	360	324	374	499
22 mm	288	332	443	398	459	612	316	365	486	437	505	673
24 mm	366	422	562	506	583	778	398	459	612	551	635	847
27 mm	535	617	823	740	854	1138	578	666	889	799	922	1229
30 mm	726	838	1117	1005	1159	1546	804	928	1237	1112	1284	1711
33 mm	988	1140	1520	1367	1577	2103	1083	1250	1667	1499	1729	2306
36 mm	1269	1464	1952	1756	2026	2701	1344	1550	2067	1859	2145	2859
39 mm	1642	1895	2527	2272	2622	3495	1731	1997	2662	2394	2762	3683

This is to be used as a guide only, there are a variety of complications that can occur that can cause this value to change.