

Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs. at 100% of yield						
Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	208	342	314	448	1118
7/8"	1-7/16"	330	544	500	716	1786
1"	1-5/8"	490	810	746	1066	2664
1-1/8"	1-13/16"	702	1170	1076	1544	3888
1-1/4"	2"	966	1622	1492	2150	5440
1-3/8"	2-3/16"	1288	2180	2000	2894	7356
1-1/2"	2-3/8"	1674	2850	2614	3792	9274
1-5/8"	2-9/16"	2142	3668	3364	4890	12520
1-3/4"	2-3/4"	2676	4602	4218	6144	15776
1-7/8"	2-15/16"	3292	5682	5204	7596	19550
2"	3-1/8"	3994	6920	6334	9260	23884
2-1/8"	N/A	4790	8324	7618	11150	28816
2-1/4"	3-1/2"	5686	9906	9068	13282	34382
2-3/8"	N/A	6686	11676	10678	15668	40620
2-1/2"	3-7/8"	7796	13646	12476	18324	47536
2-3/4"	4-1/4"	9382	16488	15066	22170	57692
3"	4-5/8"	13974	21464	19606	28894	75340
3-1/4"	5"	15470	27352	24976	36856	96258
3-1/2"	5-3/8"	19312	34226	31244	46158	120730
3-3/4"	5-3/4"	23742	42168	38482	56906	149032
4"	6-1/8"	27262	48590	44324	65652	172292
4-1/4"	6-1/2"	28802	51248	46758	69206	181440
4-1/2"	6-7/8"	32348	57742	52664	78058	205026

Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs at 70% of yield						
Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	145	239	219	313	782
7/8"	1-7/16"	231	380	350	501	1250
1"	1-5/8"	343	567	522	746	1864
1-1/8"	1-13/16"	491	819	753	1080	2721
1-1/4"	2"	676	1135	1044	1505	3808
1-3/8"	2-3/16"	901	1526	1400	2025	5149
1-1/2"	2-3/8"	1171	1995	1829	2654	6491
1-5/8"	2-9/16"	1499	2567	2354	3423	8764
1-3/4"	2-3/4"	1873	3221	2952	4300	11043
1-7/8"	2-15/16"	2304	3977	3642	5317	13685
2"	3-1/8"	2795	4844	4433	6482	16718
2-1/8"	N/A	3353	5826	5332	7805	20171
2-1/4"	3-1/2"	3980	6934	6343	9297	24067
2-3/8"	N/A	4680	8173	7474	10367	28434
2-1/2"	3-7/8"	5457	9552	8733	12862	33275
2-3/4"	4-1/4"	6567	11541	10546	15519	40384
3"	4-5/8"	9781	15024	13724	20225	52738
3-1/4"	5"	10829	19146	17483	25799	67380
3-1/2"	5-3/8"	13518	23958	21870	32310	84511
3-3/4"	5-3/4"	16619	29517	26937	39834	10432
4"	6-1/8"	19083	34013	32730	45956	12700
4-1/4"	6-1/2"	20161	35873	31026	48444	12060
4-1/2"	6-7/8"	22643	40419	36864	54640	14351

u= The coefficient of friction of the lubricant  
 Figures are a GUIDE only, always consult the manufacturer or area engineer

Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs at 60% of yield						
Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	125	205	188	269	671

7/8"	1-7/16"	198	326	300	430	1072
1"	1-5/8"	294	486	447	640	1598
1-1/8"	1-13/16"	421	702	645	926	2333
1-1/4"	2"	579	973	895	1290	3264
1-3/8"	2-3/16"	773	1308	1200	1736	4414
1-1/2"	2-3/8"	1004	1704	1568	2275	5564
1-5/8"	2-9/16"	1285	2200	2018	2934	7512
1-3/4"	2-3/4"	1605	2761	2530	3686	9465
1-7/8"	2-15/16"	1975	3409	3122	4557	11730
2"	3-1/8"	2396	4152	3800	5556	14330
2-1/8"	N/A	2874	4994	4570	6690	17289
2-1/4"	3-1/2"	3411	5943	5437	7969	20629
2-3/8"	N/A	4011	7005	6406	9400	24372
2-1/2"	3-7/8"	4677	8187	7485	10994	28521
2-3/4"	4-1/4"	5629	9892	9039	13302	34615
3"	4-5/8"	8384	12878	11763	17336	45204
3-1/4"	5"	9282	16411	14985	22113	57754
3-1/2"	5-3/8"	11587	20535	18746	27694	72438
3-3/4"	5-3/4"	14245	25300	23089	34143	89419
4"	6-1/8"	15301	27227	24842	36767	96397
4-1/4"	6-1/2"	16357	29154	26594	39391	103375
4-1/2"	6-7/8"	19408	34645	31598	46834	123015

### Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs at 50% of yield

Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	104	171	157	224	559
7/8"	1-7/16"	165	272	250	358	893
1"	1-5/8"	245	405	373	533	1332
1-1/8"	1-13/16"	351	585	538	772	1944
1-1/4"	2"	483	811	746	1075	2720
1-3/8"	2-3/16"	644	1090	1000	1447	3678
1-1/2"	2-3/8"	837	1425	1307	1896	4637
1-5/8"	2-9/16"	1071	1834	1682	2445	6260
1-3/4"	2-3/4"	1338	2301	2109	3072	7888
1-7/8"	2-15/16"	1646	2841	2602	3798	9775
2"	3-1/8"	1997	3460	3167	4630	11942
2-1/8"	N/A	2395	4162	3809	5575	14408
2-1/4"	3-1/2"	2843	4653	4531	6641	17191
2-3/8"	N/A	3343	5838	5339	7834	20310
2-1/2"	3-7/8"	3898	6823	6238	9162	23768
2-3/4"	4-1/4"	4691	8244	7533	11085	28846
3"	4-5/8"	6987	10732	9803	14447	37670
3-1/4"	5"	7735	13676	12488	18428	48129
3-1/2"	5-3/8"	9656	17113	15622	23079	60365
3-3/4"	5-3/4"	11871	21084	19241	28453	74516
4"	6-1/8"	13631	24295	22162	32826	86146
4-1/4"	6-1/2"	14401	25624	23379	34603	90720
4-1/2"	6-7/8"	16174	28871	26332	39029	102513

u= The coefficient of friction of the lubricant

Figures are a GUIDE only, always consult the manufacturer or area engineer

### Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs at 40% of yield

Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	83	136	126	179	447
7/8"	1-7/16"	132	217	200	286	714
1"	1-5/8"	196	324	298	426	1066
1-1/8"	1-13/16"	280	468	430	617	1555
1-1/4"	2"	386	649	597	1075	2176
1-3/8"	2-3/16"	515	872	800	1158	2942
1-1/2"	2-3/8"	669	1140	1045	1517	3710

1-5/8"	2-9/16"	857	1467	1345	1956	5008
1-3/4"	2-3/4"	1070	1841	1687	2458	6310
1-7/8"	2-15/16"	1317	2273	2082	3038	7820
2"	3-1/8"	1598	2768	2534	3704	9554
2-1/8"	N/A	1916	3329	3047	4460	11526
2-1/4"	3-1/2"	2274	3962	3624	5312	13753
2-3/8"	N/A	2674	4670	4271	6267	16248
2-1/2"	3-7/8"	3118	5458	4990	7329	19014
2-3/4"	4-1/4"	3752	6595	6026	8868	23076
3"	4-5/8"	5589	8585	7842	11557	30136
3-1/4"	5"	6188	10940	9990	14742	38503
3-1/2"	5-3/8"	7725	13690	12497	18463	44829
3-3/4"	5-3/4"	9497	16867	15392	28453	59612
4"	6-1/8"	10905	19436	17729	26260	68916
4-1/4"	6-1/2"	11520	20499	18703	27682	72576
4-1/2"	6-7/8"	12939	23096	21065	31232	82010

**Torque Chart for ASTM A193 Grade B7 Studs in Ft./Lbs at 30% of yield**

Bolt Diameter	Nut Size	Moly Lube	Nickel Lube	Copper Lube	Machine Oil	Dry
		u=0.085	u=0.110	u=0.100	u=0.160	u=0.400
3/4"	1-1/4"	62	103	94	134	335
7/8"	1-7/16"	99	163	150	215	536
1"	1-5/8"	147	243	224	320	799
1-1/8"	1-13/16"	211	351	322	463	1168
1-1/4"	2"	290	486	448	645	1632
1-3/8"	2-3/16"	386	855	600	868	2207
1-1/2"	2-3/8"	502	1426	784	1137	2782
1-5/8"	2-9/16"	642	1100	1009	1467	3767
1-3/4"	2-3/4"	803	1380	1265	1843	4733
1-7/8"	2-15/16"	987	1705	1561	2278	5865
2"	3-1/8"	1198	2076	1900	3345	7165
2-1/8"	N/A	1437	2497	2285	3984	8645
2-1/4"	3-1/2"	1706	2972	2719	4700	10310
2-3/8"	N/A	2006	3503	3203	5497	12180
2-1/2"	3-7/8"	2339	4094	3743	6651	14260
2-3/4"	4-1/4"	2815	4946	4520	8668	17300
3"	4-5/8"	4192	6439	5882	11057	22600
3-1/4"	5"	4635	8206	7493	13847	28870
3-1/2"	5-3/8"	5793	10268	9373	17072	36210
3-3/4"	5-3/4"	7122	12650	11545	20761	44700
4"	6-1/8"	8641	15374	14027	19695	51680
4-1/4"	6-1/2"	8178	14577	13297	20761	54430
4-1/2"	6-7/8"	9704	17322	15799	23417	61500

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