



Suggested Torque Values

SAE J429 Grade 5 – ASTM A449

Bolt Size	TPI	Proof Load (lbs)	Clamp Load (lbs)	Tightening Torque (ft lbs)		
				Lubricated	Zinc	Plain
1/4	20	2,700	2,025	6.3	7.2	8.4
5/16	18	4,450	3,338	13	14.8	17.4
3/8	16	6,600	4,950	23.2	26.3	30.9
7/16	14	9,050	6,788	37.1	42.1	49.5
1/2	13	12,050	9,038	56.5	64.0	75.3
9/16	12	15,450	11,588	81.5	92.3	108.6
5/8	11	19,200	14,400	113	127.5	150
3/4	10	28,400	21,300	200	226.3	266.3
7/8	9	39,250	29,438	322	364.9	429.3
1	8	51,500	38,625	482.8	547.2	643.8
1 1/8	7	56,450	42,338	595.4	674.8	793.8
1 1/4	7	71,700	53,775	840.2	952.3	1120.3
1 3/8	6	85,450	64,088	1101.5	1248.4	1468.7
1 1/2	6	104,000	78,000	1463	1657.5	1950
1 3/4	5	104,500	78,375	1714.5	1943	2285.9
2	4 1/2	137,500	103,125	2578.1	2921.9	3437.5
2 1/4	4 1/2	178,750	134,063	3770.5	4273.2	5027.3
2 1/2	4	220,000	165,000	5156	5843.8	6875
2 3/4	4	271,150	203,363	6990.6	7922.7	9320.8
3	4	328,350	246,263	9234.8	10466.2	12313.1