

BOLT LOAD IMPERIAL (GRADE 5)

40% - 99% YIELD



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BOLT LOADS

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)								
BOLT TENSION BASED ON 40 PERCENT YIELD													
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)
3/4 x 10	1-1/4"	0.334	92,000	12,302	84	77	96	108	115	121	154	231	84
7/8 x 9	1-7/16"	0.461	92,000	16,983	135	124	155	173	186	194	248	372	135
1x 8	1-5/8"	0.605	92,000	22,280	202	186	232	260	279	291	371	557	202
1-1/8 x 8	1-13/16"	0.790	81,000	25,598	262	240	300	336	360	377	480	720	262
1-1/4 x 8	2"	0.999	81,000	32,374	368	337	422	472	506	529	674	1,012	368
1-3/8 x 8	2-3/16"	1.233	81,000	39,945	499	458	572	641	687	719	915	1,373	499
1-1/2 x 8	2-3/8"	1.491	81,000	48,311	658	604	755	845	906	948	1,208	1,812	658

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)								
BOLT TENSION BASED ON 50 PERCENT YIELD													
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)
3/4 x 10	1-1/4"	0.334	92,000	15,377	105	96	120	135	144	151	192	288	105
7/8 x 9	1-7/16"	0.461	92,000	21,229	169	155	193	217	232	243	310	464	169
1x 8	1-5/8"	0.605	92,000	27,850	253	232	290	325	348	364	464	696	253
1-1/8 x 8	1-13/16"	0.790	81,000	31,997	327	300	375	420	450	471	600	900	327
1-1/4 x 8	2"	0.999	81,000	40,468	459	422	527	590	632	662	843	1,265	459
1-3/8 x 8	2-3/16"	1.233	81,000	49,931	624	572	715	801	858	898	1,144	1,716	624
1-1/2 x 8	2-3/8"	1.491	81,000	60,389	823	755	944	1,057	1,132	1,185	1,510	2,265	823

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)								
BOLT TENSION BASED ON 60 PERCENT YIELD													
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)
3/4 x 10	1-1/4"	0.334	92,000	18,453	126	115	144	161	173	181	231	346	126
7/8 x 9	1-7/16"	0.461	92,000	25,475	202	186	232	260	279	292	372	557	202
1x 8	1-5/8"	0.605	92,000	33,420	304	279	348	390	418	437	557	836	304
1-1/8 x 8	1-13/16"	0.790	81,000	38,397	392	360	450	504	540	565	720	1,080	392
1-1/4 x 8	2"	0.999	81,000	48,561	551	506	632	708	759	794	1,012	1,518	551
1-3/8 x 8	2-3/16"	1.233	81,000	59,918	748	687	858	961	1,030	1,078	1,373	2,060	748
1-1/2 x 8	2-3/8"	1.491	81,000	72,467	987	906	1,132	1,268	1,359	1,422	1,812	2,718	987

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)								
BOLT TENSION BASED ON 70 PERCENT YIELD													
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)
3/4 x 10	1-1/4"	0.334	92,000	21,528	147	135	168	188	202	211	269	404	147
7/8 x 9	1-7/16"	0.461	92,000	29,721	236	217	271	303	325	340	433	650	236
1x 8	1-5/8"	0.605	92,000	38,990	354	325	406	455	487	510	650	975	354
1-1/8 x 8	1-13/16"	0.790	81,000	44,796	458	420	525	588	630	659	840	1,260	458
1-1/4 x 8	2"	0.999	81,000	56,655	643	590	738	826	885	927	1,180	1,770	643
1-3/8 x 8	2-3/16"	1.233	81,000	69,904	873	801	1,001	1,121	1,201	1,258	1,602	2,403	873
1-1/2 x 8	2-3/8"	1.491	81,000	84,544	1,152	1,057	1,321	1,480	1,585	1,659	2,114	3,170	1,152

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				80	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	92,000	24,604	168	154	192	215	231	241	308	461	168	
7/8 x 9	1-7/16"	0.461	92,000	33,966	270	248	310	347	372	389	495	743	270	
1x 8	1-5/8"	0.605	92,000	44,560	405	371	464	520	557	583	743	1,114	405	
1-1/8 x 8	1-13/16"	0.790	81,000	51,195	523	480	600	672	720	754	960	1,440	523	
1-1/4 x 8	2"	0.999	81,000	64,748	735	674	843	944	1,012	1,059	1,349	2,023	735	
1-3/8 x 8	2-3/16"	1.233	81,000	79,890	998	915	1,144	1,282	1,373	1,437	1,831	2,746	998	
1-1/2 x 8	2-3/8"	1.491	81,000	96,622	1,316	1,208	1,510	1,691	1,812	1,896	2,416	3,623	1,316	

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				90	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	92,000	27,679	189	173	216	242	259	272	346	519	189	
7/8 x 9	1-7/16"	0.461	92,000	38,212	304	279	348	390	418	437	557	836	304	
1x 8	1-5/8"	0.605	92,000	50,130	455	418	522	585	627	656	836	1,253	455	
1-1/8 x 8	1-13/16"	0.790	81,000	57,595	589	540	675	756	810	848	1,080	1,620	589	
1-1/4 x 8	2"	0.999	81,000	72,842	827	759	948	1,062	1,138	1,191	1,518	2,276	827	
1-3/8 x 8	2-3/16"	1.233	81,000	89,877	1,123	1,030	1,287	1,442	1,545	1,617	2,060	3,090	1,123	
1-1/2 x 8	2-3/8"	1.491	81,000	108,700	1,481	1,359	1,698	1,902	2,038	2,133	2,718	4,076	1,481	

TORQUE GUIDE FOR SAE J429 GR 5 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				99	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL& GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	92,000	30,447	207	190	238	266	285	299	381	571	207	
7/8 x 9	1-7/16"	0.461	92,000	42,033	334	306	383	429	460	481	613	919	334	
1x 8	1-5/8"	0.605	92,000	55,143	501	460	574	643	689	721	919	1,379	501	
1-1/8 x 8	1-13/16"	0.790	81,000	63,354	647	594	742	832	891	932	1,188	1,782	647	
1-1/4 x 8	2"	0.999	81,000	80,126	910	835	1,043	1,168	1,252	1,310	1,669	2,504	910	
1-3/8 x 8	2-3/16"	1.233	81,000	98,864	1,235	1,133	1,416	1,586	1,699	1,779	2,266	3,398	1,235	
1-1/2 x 8	2-3/8"	1.491	81,000	119,570	1,629	1,495	1,868	2,092	2,242	2,347	2,989	4,484	1,629	

