

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-1XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGFM
14	200	29	39	4
28	400	57	78	8
41	600	86	116	12
55	800	114	155	16
69	1,000	143	194	20
83	1,200	169	229	24
97	1,400	195	264	27
110	1,600	220	299	31
124	1,800	246	334	35
138	2,000	272	369	38
152	2,200	299	405	42
165	2,400	326	442	46
179	2,600	353	479	49
193	2,800	380	515	53
207	3,000	407	552	57
221	3,200	435	589	61
234	3,400	462	627	64
248	3,600	490	664	68
262	3,800	517	702	72
276	4,000	545	739	76
290	4,200	572	775	80
303	4,400	598	811	83
317	4,600	625	847	87
331	4,800	651	883	91
345	5,000	678	919	94

BAR	P.S.I	FT./LBS.	NM	KGFM
359	5,200	705	956	98
372	5,400	733	994	102
386	5,600	760	1,031	106
400	5,800	788	1,068	109
414	6,000	815	1,105	113
427	6,200	843	1,143	117
441	6,400	871	1,181	121
455	6,600	900	1,220	125
469	6,800	928	1,258	129
483	7,000	956	1,296	133
496	7,200	983	1,333	136
510	7,400	1,010	1,369	140
524	7,600	1,037	1,406	144
538	7,800	1,064	1,443	148
552	8,000	1,091	1,479	151
565	8,200	1,120	1,519	155
579	8,400	1,149	1,558	159
593	8,600	1,179	1,598	163
607	8,800	1,208	1,638	167
621	9,000	1,237	1,677	172
634	9,200	1,266	1,716	176
648	9,400	1,295	1,756	180
662	9,600	1,324	1,795	184
676	9,800	1,353	1,834	188
690	10,000	1,382	1,874	192

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-3XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	52	53	55
28	400	103	106	110
41	600	155	159	164
55	800	206	213	219
69	1,000	266	274	282
83	1,200	316	326	335
97	1,400	374	385	397
110	1,600	432	445	458
124	1,800	490	505	520
138	2,000	565	582	599
152	2,200	604	622	641
165	2,400	660	680	701
179	2,600	716	738	760
193	2,800	772	796	820
207	3,000	854	880	906
221	3,200	886	913	941
234	3,400	944	973	1,002
248	3,600	1,002	1,033	1,064
262	3,800	1,060	1,093	1,125
276	4,000	1,152	1,188	1,224
490	4,200	1,177	1,214	1,250
303	4,400	1,237	1,275	1,313
317	4,600	1,296	1,336	1,376
331	4,800	1,356	1,398	1,440
345	5,000	1,459	1,504	1,549

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	1,473	1,518	1,564
372	5,400	1,530	1,578	1,625
386	5,600	1,588	1,637	1,686
400	5,800	1,645	1,696	1,747
414	6,000	1,756	1,810	1,864
427	6,200	1,762	1,816	1,871
441	6,400	1,820	1,876	1,933
455	6,600	1,879	1,937	1,995
469	6,800	1,937	1,997	2,057
483	7,000	2,057	2,121	2,185
496	7,200	2,051	2,115	2,178
510	7,400	2,107	2,172	2,237
524	7,600	2,162	2,229	2,296
538	7,800	2,218	2,286	2,355
552	8,000	2,344	2,416	2,488
565	8,200	2,333	2,405	2,477
579	8,400	2,393	2,467	2,541
593	8,600	2,452	2,528	2,604
607	8,800	2,512	2,590	2,667
621	9,000	2,651	2,733	2,815
634	9,200	2,628	2,709	2,790
648	9,400	2,684	2,767	2,850
662	9,600	2,740	2,824	2,909
676	9,800	2,796	2,882	2,969
700	10,000	2,940	3,031	3,122

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-6XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGFM
14	200	113	153	16
28	400	226	306	32
41	600	338	459	47
55	800	451	612	63
69	1,000	564	765	78
83	1,200	665	901	92
97	1,400	765	1,037	106
110	1,600	866	1,174	120
124	1,800	966	1,310	134
138	2,000	1,067	1,447	148
152	2,200	1,173	1,591	163
165	2,400	1,280	1,735	177
179	2,600	1,386	1,879	192
193	2,800	1,493	2,024	207
207	3,000	1,599	2,168	222
221	3,200	1,701	2,307	236
234	3,400	1,804	2,446	250
248	3,600	1,906	2,584	264
262	3,800	2,009	2,723	278
276	4,000	2,111	2,862	292
290	4,200	2,213	3,000	306
303	4,400	2,315	3,139	321
317	4,600	2,417	3,277	335
331	4,800	2,519	3,415	349
345	5,000	2,621	3,554	363

BAR	P.S.I	FT./LBS.	NM	KGFM
359	5,200	2,726	3,696	377
372	5,400	2,831	3,838	392
386	5,600	2,935	3,980	406
400	5,800	3,040	4,122	421
414	6,000	3,145	4,264	435
427	6,200	3,251	4,407	450
441	6,400	3,357	4,551	465
455	6,600	3,462	4,694	479
469	6,800	3,568	4,838	494
483	7,000	3,674	4,981	508
496	7,200	3,778	5,123	523
510	7,400	3,883	5,264	537
524	7,600	3,987	5,406	552
538	7,800	4,092	5,547	566
552	8,000	4,196	5,689	581
565	8,200	4,304	5,835	596
579	8,400	4,412	5,981	610
593	8,600	4,519	6,127	625
607	8,800	4,627	6,274	640
621	9,000	4,735	6,420	655
634	9,200	4,810	6,521	666
648	9,400	4,885	6,623	676
662	9,600	4,960	6,725	686
676	9,800	5,035	6,827	697
690	10,000	5,110	6,928	707

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-8XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGFM
14	200	170	230	24
28	400	339	460	47
41	600	509	690	71
55	800	678	920	94
69	1,000	848	1,150	118
83	1,200	1,024	1,388	142
97	1,400	1,200	1,626	166
110	1,600	1,375	1,865	191
124	1,800	1,551	2,103	215
138	2,000	1,727	2,342	239
152	2,200	1,893	2,567	262
165	2,400	2,059	2,792	285
179	2,600	2,225	3,017	308
193	2,800	2,391	3,242	331
207	3,000	2,557	3,467	354
221	3,200	2,736	3,710	379
234	3,400	2,915	3,952	404
248	3,600	3,094	4,195	428
262	3,800	3,273	4,438	453
276	4,000	3,452	4,680	478
290	4,200	3,631	4,922	502
303	4,400	3,809	5,165	527
317	4,600	3,988	5,407	552
331	4,800	4,166	5,649	577
345	5,000	4,345	5,891	601

BAR	P.S.I	FT./LBS.	NM	KGFM
359	5,200	4,504	6,107	623
372	5,400	4,664	6,323	645
386	5,600	4,823	6,539	667
400	5,800	4,983	6,756	689
414	6,000	5,142	6,972	711
427	6,200	5,330	7,227	737
441	6,400	5,518	7,481	763
455	6,600	5,706	7,736	789
469	6,800	5,894	7,991	815
483	7,000	6,082	8,246	841
496	7,200	6,255	8,480	865
510	7,400	6,427	8,714	889
524	7,600	6,600	8,948	913
538	7,800	6,772	9,182	937
552	8,000	6,945	9,416	961
565	8,200	7,087	9,609	980
579	8,400	7,230	9,802	1,000
593	8,600	7,372	9,995	1,020
607	8,800	7,515	10,188	1,039
621	9,000	7,657	10,382	1,059
634	9,200	7,835	10,622	1,084
648	9,400	8,012	10,863	1,108
662	9,600	8,190	11,104	1,133
676	9,800	8,367	11,345	1,157
700	10,000	8,545	11,585	1,182

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-11XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	208	281	29
28	400	415	563	58
41	600	623	844	87
55	800	830	1,126	115
69	1,000	1,038	1,407	144
83	1,200	1,254	1,700	174
97	1,400	1,470	1,993	204
110	1,600	1,686	2,286	234
124	1,800	1,902	2,579	263
138	2,000	2,118	2,872	293
152	2,200	2,329	3,158	323
165	2,400	2,540	3,444	352
179	2,600	2,752	3,731	381
193	2,800	2,963	4,017	410
207	3,000	3,174	4,303	439
221	3,200	3,389	4,595	469
234	3,400	3,604	4,886	499
248	3,600	3,819	5,178	528
262	3,800	4,034	5,469	558
276	4,000	4,249	5,761	588
290	4,200	4,467	6,056	618
303	4,400	4,685	6,351	648
317	4,600	4,902	6,647	678
331	4,800	5,120	6,942	708
345	5,000	5,338	7,237	739

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	5,556	7,533	769
372	5,400	5,774	7,829	799
386	5,600	5,992	8,124	829
400	5,800	6,210	8,420	859
414	6,000	6,428	8,715	889
427	6,200	6,646	9,011	919
441	6,400	6,865	9,307	950
455	6,600	7,083	9,604	980
469	6,800	7,302	9,900	1,010
483	7,000	7,520	10,196	1,040
496	7,200	7,738	10,492	1,070
510	7,400	7,957	10,788	1,101
524	7,600	8,175	11,084	1,131
538	7,800	8,394	11,380	1,161
552	8,000	8,612	11,676	1,191
565	8,200	8,831	11,973	1,221
579	8,400	9,050	12,270	1,252
593	8,600	9,269	12,567	1,282
607	8,800	9,488	12,864	1,312
621	9,000	9,707	13,161	1,343
634	9,200	9,924	13,455	1,373
648	9,400	10,141	13,750	1,403
662	9,600	10,359	14,044	1,433
676	9,800	10,576	14,339	1,463
700	10,000	10,793	14,633	1,493

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-20XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	351	475	49
28	400	701	951	97
41	600	1,052	1,426	146
55	800	1,402	1,901	194
69	1,000	1,753	2,377	243
83	1,200	2,125	2,881	294
97	1,400	2,497	3,385	346
110	1,600	2,868	3,889	397
124	1,800	3,240	4,393	448
138	2,000	3,612	4,897	500
152	2,200	3,940	5,342	545
165	2,400	4,268	5,787	591
179	2,600	4,597	6,232	636
193	2,800	4,925	6,677	681
207	3,000	5,253	7,122	727
221	3,200	5,654	7,665	782
234	3,400	6,054	8,208	838
248	3,600	6,455	8,752	893
262	3,800	6,855	9,295	948
276	4,000	7,256	9,838	1,004
290	4,200	7,613	10,322	1,053
303	4,400	7,970	10,806	1,102
317	4,600	8,328	11,291	1,152
331	4,800	8,685	11,775	1,201
345	5,000	9,042	12,259	1,251

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	9,417	12,768	1,303
372	5,400	9,793	13,277	1,354
386	5,600	10,168	13,786	1,406
400	5,800	10,544	14,295	1,458
414	6,000	10,919	14,804	1,510
427	6,200	11,248	15,251	1,556
441	6,400	11,577	15,697	1,601
455	6,600	11,907	16,143	1,647
469	6,800	12,236	16,590	1,692
483	7,000	12,565	17,036	1,738
496	7,200	12,922	17,520	1,787
510	7,400	13,279	18,004	1,836
524	7,600	13,636	18,488	1,886
538	7,800	13,993	18,972	1,935
552	8,000	14,350	19,456	1,984
565	8,200	14,718	19,956	2,035
579	8,400	15,087	20,455	2,086
593	8,600	15,455	20,954	2,137
607	8,800	15,824	21,454	2,188
621	9,000	16,192	21,953	2,239
634	9,200	16,540	22,426	2,287
648	9,400	16,889	22,898	2,335
662	9,600	17,237	23,371	2,384
676	9,800	17,586	23,843	2,432
690	10,000	17,934	24,315	2,480

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-30XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	528	715	73
28	400	1,055	1,431	146
41	600	1,583	2,146	219
55	800	2,110	2,861	292
69	1,000	2,638	3,577	365
83	1,200	3,154	4,276	437
97	1,400	3,670	4,975	508
110	1,600	4,185	5,675	579
124	1,800	4,701	6,374	650
138	2,000	5,217	7,073	722
152	2,200	5,748	7,794	795
165	2,400	6,279	8,514	869
179	2,600	6,811	9,234	942
193	2,800	7,342	9,954	1,016
207	3,000	7,873	10,674	1,089
221	3,200	8,376	11,356	1,158
234	3,400	8,878	12,037	1,228
248	3,600	9,381	12,719	1,297
262	3,800	9,883	13,400	1,367
276	4,000	10,386	14,082	1,436
290	4,200	10,903	14,783	1,508
303	4,400	11,420	15,484	1,579
317	4,600	11,938	16,185	1,651
331	4,800	12,455	16,886	1,722
345	5,000	12,972	17,588	1,794

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	13,477	18,272	1,864
372	5,400	13,982	18,957	1,934
386	5,600	14,487	19,642	2,003
400	5,800	14,992	20,326	2,073
414	6,000	15,497	21,011	2,143
427	6,200	16,010	21,707	2,214
441	6,400	16,523	22,403	2,285
455	6,600	17,037	23,099	2,356
469	6,800	17,550	23,794	2,427
483	7,000	18,063	24,490	2,498
496	7,200	18,579	25,189	2,569
510	7,400	19,094	25,888	2,640
524	7,600	19,610	26,587	2,712
538	7,800	20,125	27,286	2,783
552	8,000	20,641	27,985	2,854
565	8,200	21,157	28,685	2,926
579	8,400	21,673	29,385	2,997
593	8,600	22,189	30,084	3,068
607	8,800	22,705	30,784	3,140
621	9,000	23,221	31,483	3,211
690	9,200	23,738	32,184	3,282
648	9,400	24,254	32,884	3,354
662	9,600	24,771	33,585	3,425
676	9,800	25,287	34,285	3,497
700	10,000	25,804	34,986	3,568

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-45XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	880	1,193	122
28	400	1,760	2,386	244
41	600	2,640	3,579	365
55	800	3,520	4,772	487
69	1,000	4,400	5,966	609
83	1,200	5,227	7,087	723
97	1,400	6,054	8,208	837
110	1,600	6,881	9,329	952
124	1,800	7,708	10,451	1,066
138	2,000	8,535	11,572	1,181
152	2,200	9,410	12,758	1,301
165	2,400	10,285	13,944	1,422
179	2,600	11,159	15,130	1,543
193	2,800	12,034	16,316	1,664
207	3,000	12,909	17,502	1,785
221	3,200	13,895	18,839	1,922
234	3,400	14,880	20,175	2,058
248	3,600	15,866	21,511	2,194
262	3,800	16,851	22,847	2,330
276	4,000	17,837	24,184	2,467
290	4,200	18,735	25,401	2,591
303	4,400	19,633	26,619	2,715
317	4,600	20,531	27,836	2,839
331	4,800	21,429	29,054	2,963
345	5,000	22,327	30,271	3,087

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	23,246	31,517	3,214
372	5,400	24,164	32,762	3,341
386	5,600	25,083	34,008	3,468
400	5,800	26,001	35,253	3,595
414	6,000	26,920	36,499	3,722
427	6,200	27,919	37,853	3,860
441	6,400	28,918	39,208	3,999
455	6,600	29,917	40,562	4,137
469	6,800	30,916	41,917	4,275
483	7,000	31,915	43,271	4,413
496	7,200	32,756	44,411	4,529
510	7,400	33,597	45,551	4,645
524	7,600	34,438	46,692	4,762
538	7,800	35,279	47,832	4,878
552	8,000	36,120	48,972	4,994
565	8,200	37,014	50,185	5,118
579	8,400	37,908	51,397	5,242
593	8,600	38,803	52,609	5,365
607	8,800	39,697	53,822	5,489
621	9,000	40,591	55,034	5,612
634	9,200	41,799	56,672	5,779
648	9,400	43,007	58,310	5,946
662	9,600	44,215	59,948	6,113
676	9,800	45,423	61,585	6,280
690	10,000	46,631	63,223	6,447

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.

SU-XL SERIES

SQUARE DRIVE RATCHET WRENCH

SU-60XL

10,000 P.S.I. & 700 BAR
+/- 3%

BAR	P.S.I	FT./LBS.	NM	KGF*M
14	200	1,023	1,386	142
28	400	2,045	2,773	283
41	600	3,068	4,159	425
55	800	4,090	5,546	566
69	1,000	5,113	6,932	707
83	1,200	6,110	8,284	845
97	1,400	7,107	9,636	983
110	1,600	8,104	10,988	1,121
124	1,800	9,101	12,339	1,259
138	2,000	10,098	13,691	1,397
152	2,200	11,210	15,199	1,550
165	2,400	12,322	16,706	1,704
179	2,600	13,434	18,214	1,858
193	2,800	14,546	19,722	2,012
207	3,000	15,658	21,229	2,165
221	3,200	16,824	22,810	2,326
234	3,400	17,990	24,391	2,488
248	3,600	19,155	25,971	2,649
262	3,800	20,321	27,552	2,810
276	4,000	21,487	29,133	2,971
290	4,200	22,565	30,594	3,120
303	4,400	23,643	32,056	3,269
317	4,600	24,722	33,518	3,418
331	4,800	25,800	34,980	3,567
345	5,000	26,878	36,442	3,717

BAR	P.S.I	FT./LBS.	NM	KGF*M
359	5,200	27,999	37,962	3,872
372	5,400	29,121	39,483	4,027
386	5,600	30,242	41,003	4,182
400	5,800	31,364	42,523	4,337
414	6,000	32,485	44,044	4,492
427	6,200	33,608	45,566	4,647
441	6,400	34,730	47,088	4,802
455	6,600	35,853	48,610	4,957
469	6,800	36,975	50,132	5,113
483	7,000	38,098	51,654	5,268
496	7,200	39,217	53,171	5,422
510	7,400	40,336	54,688	5,577
524	7,600	41,455	56,206	5,732
538	7,800	42,574	57,723	5,887
552	8,000	43,693	59,240	6,041
565	8,200	44,818	60,765	6,197
579	8,400	45,943	62,290	6,352
593	8,600	47,068	63,816	6,508
607	8,800	48,193	65,341	6,663
621	9,000	49,318	66,866	6,819
634	9,200	50,435	68,381	6,973
648	9,400	51,553	69,896	7,128
662	9,600	52,670	71,411	7,282
676	9,800	53,788	72,926	7,437
690	10,000	54,905	74,441	7,591

Hydraulic Torque wrench was calibrated on TSD 20011-HT Hydraulic Torque Wrench Calibration System having a range of 0 to 20,000 X 2 Lb.Ft. S/N 4041 with an Accuracy 0.1% IV, Uncertainty +/- 2 Lb.Ft. and TSD 10K PSI, 0 to 10,000 X 1 PSI, 0.1% Pressure Standard, Uncertainty +/- 1 PSI. S/N 44818 Systems are traceable to National Institute for Standards and Technology (NIST) through Reference # 822/266926-02.