

STC INSTALLATION INSTRUCTIONS

Warning; Never snug or tighten screws before mounting STC coupling on the hub/shaft: both the hub and STC coupling can be permanently damaged by low screw torques.

1. Remove any burrs or raised metal on the shaft and all mating parts. Clean and remove all contamination and lubricant from the shaft, hub bore and ID of the STC coupling.
2. Loosen all locking screws a minimum of two revolutions.
3. Slide the STC coupling onto the hub (hub should be mounted on shaft) and into position.
4. By hand, begin to snug four (4) screws in a star pattern, see page 6, FIG. 14. To maintain concentricity do not over-tighten. Snug remaining screws to the collar, do not tighten.
5. Verify that the hub is correctly positioned!
6. Set torque wrench at 50% of final torque. Start at 12 o'clock position, begin to evenly tighten, in a clockwise sequence, each screw a maximum of 1/4 revolution. Several passes will be required to achieve the specified screw torque. Note: as the next screw is tightened the previous screw tightened will relax.
7. Continue to make complete passes around the STC coupling until the torque wrench turns less than 1/8 revolution. Increase the "Final Torque" rating by 5% to compensate for the neighboring screw relaxing.
8. With the torque wrench set at the final torque specification, randomly check several screws torque. If any screw moves more than 1/16 of a revolution, repeat step 7.

Removal:

1. With a star pattern, loosen screws 1/4 turn for five complete passes or until all screws are loose.
2. If the unit is corroded, a light tapping on the head of the jack-screws can help the unit release. Also remove any corrosion or buildup from in front of the hub or STC coupling prior to removal.

Hub Design Considerations:

There are many possible hub designs that can be utilized with the STC coupling. The transition radius requires careful attention to ensure that the area is polished (10 RMS) and does not cause a stress riser or potential for cracks, see FIG. 44 View A. Note; dimension "a" is the offset from the hub and is not the radius, see FIG. 45 View B.

To avoid problems associated with maintaining hub bore tolerances, it is recommended to machine a web relief area of approximately 70% of "x" with a depth of 0.002 per inch of shaft, see FIG. 45.

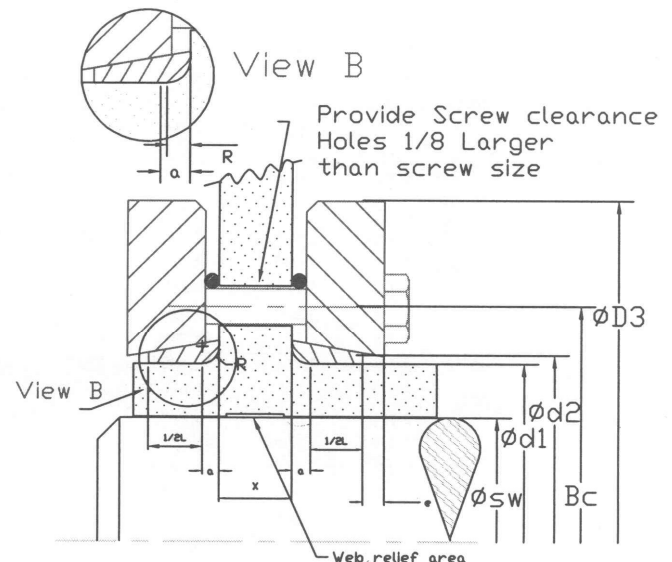


Fig. 45

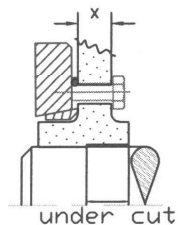


Fig. 42

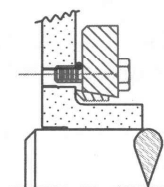


Fig. 43

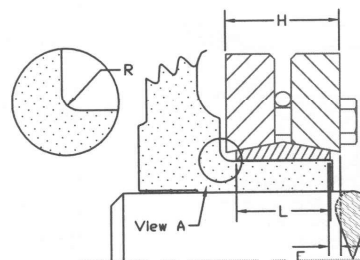


Fig. 44

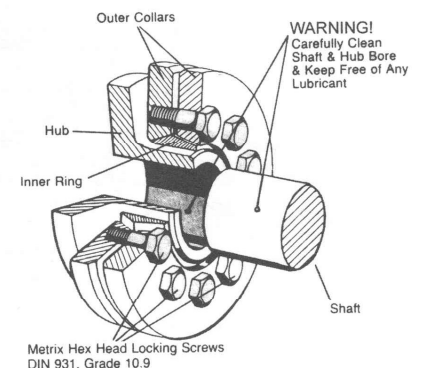


Fig. 46

Table 19. STC, Light, Medium & Heavy Duty Series

Size and Series	d1	TH	sw min	sw max	Tw	Mt Torque Capacity		Metric & Inch Dimensional Data										Tightening Screws		Weight (lb)
						sw min.	sw max.	Bc	D3	L	H	E	d2	Z	a	R	Qty	Size		
						(lb-ft)	(lb-ft)													
STC10, Light Duty Series																				
125-10	4.921		3.683	4.188	.0027	9,040	13,340	6.220	7.48	1.535	2.05	.236	5.078	.078	.197	1/8	8	M10	13	
140-10	5.512	+0	4.250	4.939	.0027	14,640	22,130	6.889	8.67	1.535	2.05	.236	5.669	.078	.197	1/8	10	M10	18	
155-10	6.102	-0.004	5.000	5.500		23,040	29,900	7.559	9.65	1.535	2.05	.236	6.259	.078	.197	1/8	12	M10	22	
165-10	6.496		5.313	5.750		28,820	36,950	8.267	10.24	1.811	2.44	.314	6.653	.078	.197	3/16	10	M12	32	
175-10	6.890		5.688	6.125	.0032	32,460	39,650	8.661	10.83	1.811	2.44	.314	7.047	.078	.197	3/16	10	M12	35	
185-10	7.283		6.063	6.500		43,040	51,480	8.858	11.62	1.811	2.44	.314	7.440	.078	.197	3/16	12	M12	45	
195-10	7.677		6.438	6.938		57,950	70,130	9.330	12.40	2.204	2.84	.314	7.834	.078	.197	3/16	15	M12	60	
220-10	8.661	+0	7.000	7.875		74,130	100,660	10.433	13.59	2.598	3.31	.354	8.818	.157	.197	3/16	10	M16	80	
240-10	9.449	-0.004	7.813	8.500		104,990	129,520	11.417	14.57	2.598	3.31	.354	9.606	.157	.295	3/16	12	M16	100	
260-10	10.236		8.625	9.250	.0036	118,310	141,270	12.204	15.55	2.834	3.63	.354	10.433	.157	.295	1/4	12	M16	110	
280-10	11.024		9.063	9.875		148,040	181,450	13.110	16.74	3.307	4.10	.393	11.220	.157	.295	1/4	16	M16	132	
300-10	11.811		9.813	10.625		186,340	224,650	14.094	18.11	3.307	4.10	.393	12.007	.157	.295	1/4	18	M16	165	
320-10	12.598	-0.002	10.563	11.438		204,560	244,690	14.881	19.49	3.307	4.18	.433	12.795	.157	.295	1/4	18	M16	185	
340-10	13.386	-0.005	11.375	12.063	.004	252,430	286,570	15.826	21.07	3.307	4.18	.433	13.582	.157	.295	1/4	20	M16	220	
360-10	14.173		11.813	12.625		318,810	371,380	16.653	21.85	3.937	4.81	.433	14.370	.157	.394	5/16	16	M20	275	
390-10	15.354		12.688	13.750		433,130	507,410	17.795	23.43	4.409	5.36	.472	15.629	.157	.394	5/16	20	M20	344	
420-10	16.535	-0.003	13.750	14.625	.0045	457,280	524,340	19.094	24.81	4.724	5.67	.472	16.810	.236	.394	5/16	20	M20	407	
460-10	18.110	-0.006	14.688	16.375		606,750	722,510	20.747	26.97	5.196	6.22	.511	18.425	.236	.492	3/8	24	M20	517	
500-10	19.865		16.438	17.375	.005	840,140	944,290	22.519	29.53	5.984	7.01	.511	19.999	.236	.492	3/8	30	M20	704	
STC20, Medium Duty Series																				
24-20	.945		.750	.813	.001	296	402	1.417	1.97	.551	.71	.078	1.023	.039	.098	1/16	6	M5	.5	
30-20	1.181		1.063	1.000	.0013	331	561	1.732	2.36	.629	.79	.078	1.259	.039	.098	1/16	7	M5	.7	
36-20	1.417		1.063	1.250		516	885	2.047	2.83	.700	.87	.078	1.496	.039	.098	1/16	5	M6	.9	
44-20	1.732		1.313	1.438	.0016	992	1,412	2.402	3.15	.787	.94	.078	1.850	.039	.098	1/16	7	M6	1.4	
50-20	1.969	+0	1.500	1.688		1,320	1,870	2.756	3.54	.866	1.02	.078	2.086	.039	.098	1/16	8	M6	1.8	
55-20	2.165	-0.002	1.625	1.875		1,370	2,110	2.953	3.94	.905	1.14	.118	2.283	.039	.098	3/32	8	M6	2.4	
62-20	2.441		1.875	2.000		2,090	2,530	3.386	4.33	.905	1.14	.118	2.598	.039	.098	3/32	10	M6	2.9	
68-20	2.677		1.938	2.375		1,910	3,510	3.386	4.53	.905	1.14	.118	2.834	.039	.098	3/32	10	M6	3.0	
75-20	2.953		2.125	2.500		2,810	4,450	3.937	5.43	.984	1.22	.118	3.110	.039	.197	1/8	7	M8	3.8	
80-20	3.150		2.313	2.750	.0019	3,180	5,170	3.937	5.71	.984	1.22	.118	3.307	.039	.197	1/8	7	M8	4.2	
90-20	3.543		2.563	2.938		5,110	7,380	4.488	6.10	1.181	1.49	.157	3.700	.039	.197	1/8	10	M8	7.3	
100-20	3.937		2.750	3.125		6,280	8,840	4.882	6.69	1.338	1.69	.177	4.094	.039	.197	1/8	12	M8	10.4	
110-20	4.331		2.938	3.500		7,695	12,210	5.354	7.28	1.535	1.93	.197	4.488	.078	.197	1/8	9	M10	13.0	
125-20	4.921		3.375	3.938		11,590	17,700	6.299	8.46	1.653	2.04	.197	5.275	.078	.197	1/8	12	M10	18.3	
140-20	5.512	+0	3.750	4.250		15,890	22,200	6.890	9.06	1.811	2.28	.236	5.708	.078	.197	3/16	10	M12	22.5	
155-20	6.102	-0.004	4.125	4.750	.0027	21,270	30,680	7.559	10.35	1.968	2.44	.236	6.496	.078	.197	3/16	12	M12	31	
165-20	6.496		4.500	5.000	.0027	31,080	40,520	8.268	11.42	2.204	2.67	.236	6.889	.078	.197	3/16	8	M16	49	
175-20	6.890		4.938	5.313		34,760	42,120	8.661	11.81	2.204	2.67	.236	7.283	.078	.197	3/16	8	M16	50	
185-20	7.283		5.313	5.688		48,010	57,400	9.921	12.99	2.795	3.34	.236	7.677	.078	.197	3/16	10	M16	82	
195-20	7.677		5.500	6.063	.0032	59,100	76,490	9.685	13.78	2.795	3.34	.236	8.110	.078	.197	3/16	12	M16	91	
200-20	7.874		5.875	6.313		68,060	81,450	9.685	13.78	2.795	3.34	.236	8.110	.078	.197	3/16	12	M16	90	
220-20	8.661	-0.002	6.250	6.688		79,250	92,650	10.630	14.57	3.464	4.06	.315	8.897	.157	.295	1/4	15	M16	119	
240-20	9.449	-0.004	6.625	7.500		105,850	139,530	11.614	15.95	3.622	4.22	.315	9.763	.157	.295	1/4	12	M20	148	
260-20	10.236		7.438	8.313		137,950	198,150	12.638	16.93	4.055	4.69	.315	10.551	.157	.295	1/4	14	M20	181	
280-20	11.024		8.250	9.063		189,580	235,900	13.622	18.11	4.488	5.20	.354	11.338	.157	.394	5/16	16	M20	225	
300-20	11.811	-0.002	9.000	9.688	.0036	266,440	306,140	14.331	19.10	4.803	5.52	.354	12.125	.157	.394	5/16	18	M20	260	
320-20	12.598	-0.005	9.500	10.250		272,020	326,110	15.197	20.48	4.803	5.52	.354	12.913	.157	.394	5/16	20	M20	288	
340-20	13.386		9.813	10.625		329,090	394,530	16.063	22.44	5.276	6.14	.394	13.700	.157	.394	5/16	24	M20	409	
350-20	13.780		10.625	11.250		359,710	409,510	17.008	22.84	5.511	6.30	.394	14.488	.157	.394	5/16	24	M20	429	
360-20	14.173		11.000	11.625	.004	396,840	449,500	17.008	23.23	5.511	6.30	.394	14.488	.157	.394	5/16	24	M20	449	
380-20	14.961		11.375	12.250		490,980	575,850	18.031	25.40	5.669	6.46	.394	15.276	.157	.394	5/16	20	M24	526	
390-20	15.354		11.875	12.625		526,240	607,250	18.504	25.99	5.669	6.46	.394	15.629	.157	.5906	7/16	21	M24	572	
420-20	16.535		12.688	13.750		681,340	796,290	20.276	27.17	6.456	7.25	.394	16.929	.236	.5906	7/16	24	M24	630	
440-20	17.323		13.375	14.188	.0045	700,340	800,230	21.260	29.53	6.771	7.56	.394	17.716	.236	.7087	1/2	24	M24	835	
460-20	18.110	-0.003	14.125	14.938		755,120	856,680	21.654	30.32	6.771	7.56	.394	18.425	.236	.7087	1/2	24	M24	924	
480-20	18.898	-0.006	14.938	15.750		1,024,550	1,152,110	22.835	31.50	7.401	8.39	.492	19.291	.236	.9843	3/4	30	M24	1110	
500-20	19.865		15.750	16.563	.005	1,151,610	1,288,210	23.622	33.57	7.40										