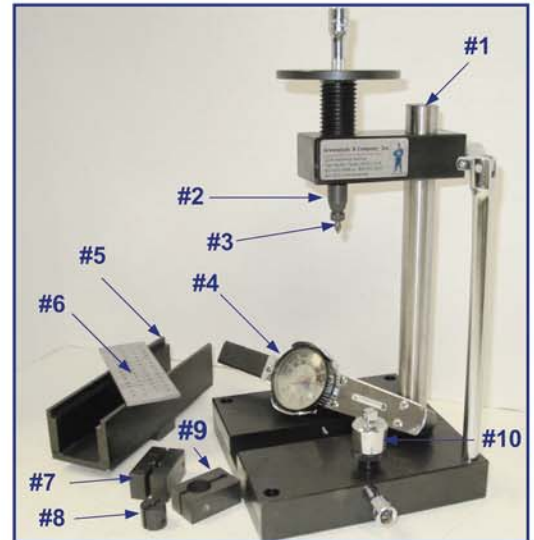




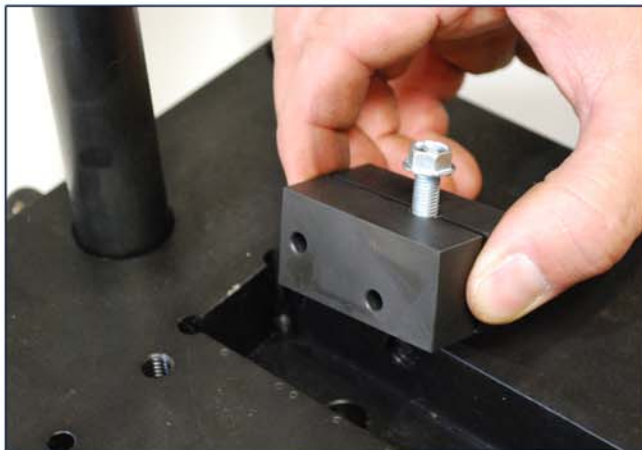
TORSIONAL STRENGTH TESTER

MODEL STF 250

- #1 Screw testing fixture, STF-250
- #2 Driver bit holder, STF BIT HOLDER
- #3 Driver bits (specify recess type and size)
- #4 Torque wrench (specify smallest and largest screw to test)
- #5 Test plate holder, STFPH-250
- #6 Test plate (specify screw type and size to test)
- #7 Split collet for testing screws 1/4 inch and M6 and larger
- #8 Split collet for testing screws smaller than 1/4 inch and M6
- #9 Split collet holder for small screw collets, STFCH 250
- #10 Ratchet adaptor to facilitate rapid screw testing, STF RATCHET

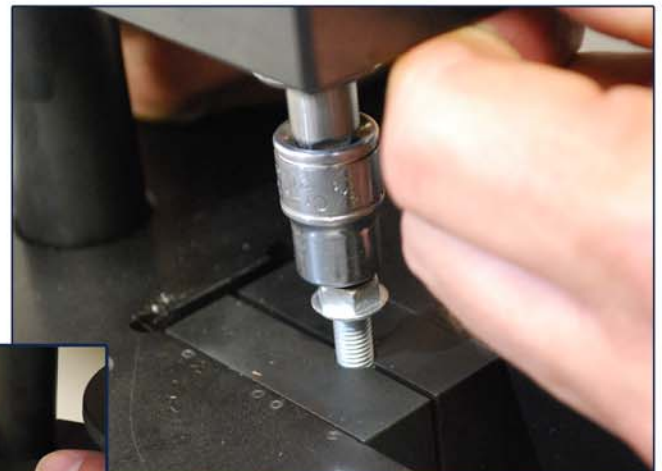


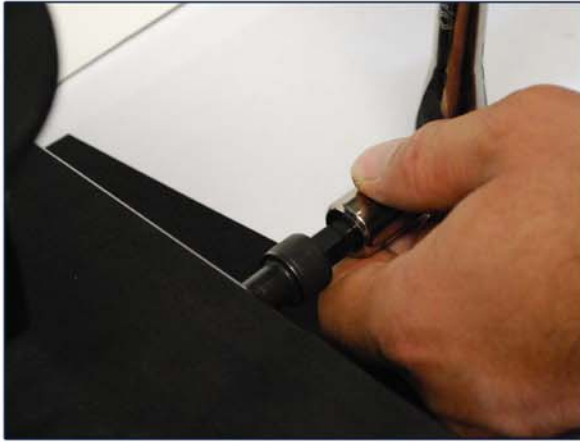
OPERATING PROCEDURE



- 1) Pick the correct collet size, based on the fastener type and size.
- 2) Thread the fastener into the collet so that only a minimum of 2-3 threads are left above the surface of the collet. The clamped portion of threads should not be damaged during this process.
- 3) Set it in the channel, in the base of the fixture (use collet holder for smaller collets).

- 4) Insert the correct driver bit
- 5) Lower the upper arm to align by loosening the bolt on the back. Align the driver bit and collet, lock the arm in place by re-tightening the bolt on back.
- 6) Rotate the hand wheel to ensure full engagement of the driver bit to the fastener



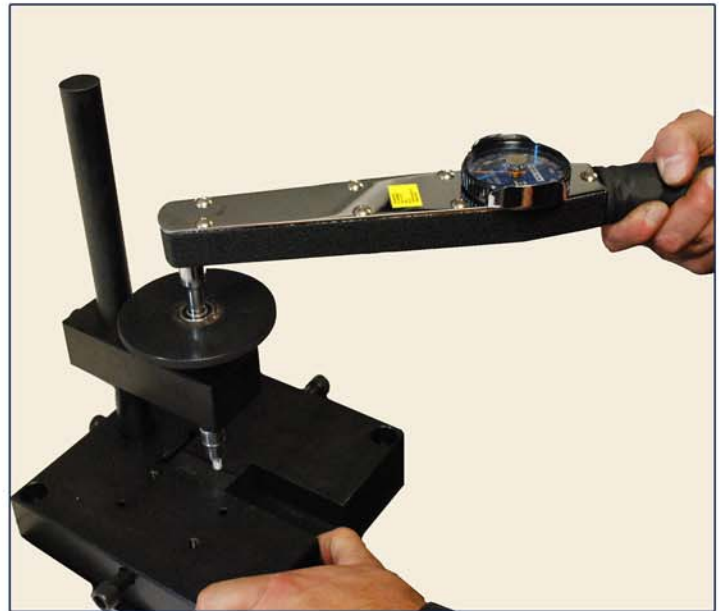


7) Lock down the collet/screw assembly using screws located on each side of the base.

8) Connect the calibrated torque wrench to the center shaft on top of the upper arm.

9) Rotate the torque wrench until the fastener fails. Note the torque value at the time of failure.

note: if the screw rotates during test, stop and retighten the clamps on each side of the base.



**Torsional Strength Requirements
for Tapping Screws per
ASME B18.6.4**

Nominal Screw Size	Minimum Torsional Strength, lb. - in.			
	Type A	Types AB, B, BF, & BT	Types C, D, F, G & T	
			Coarse Thread	Fine Thread
2	4	4	5	6
3	9	9	9	10
4	12	13	13	15
5	18	18	18	20
6	24	24	23	27
7	30	30		
8	39	39	42	47
10	48	56	56	74
12	83	88	93	108
14	125			
1/4		142	140	179
16	152			
18	196			
5/16		290	306	370
20	250			
24	492			
3/8		590	560	710
7/16		620	700	820
1/2		1020	1075	1285