Torque Wrench Testing

On today’s engines, proper bolt torquing is becoming more and more important if not completely necessary. The days of doing it the German way and making it ‘Gutantight’ are long gone. Time to drag out the old torque wrench. If the last time you saw your torque wrench was a few years ago at tech school, then this blog’s for you.

In a very unscientific procedure, I went around our building and gathered up some new and very used torque wrenches. Full disclosure: I am not a certified inspector or even a slightly competent tester. But I had a little fun testing these wrenches and the results actually surprised me. Disclaimer: no tool truck torque wrenches were harmed in the making of this blog. Since once again I am not a certified anything the word defendant and the thought of a defamation lawsuit kept coming to mind.

So for today, this is my makeshift setup. I have a Kent-Moore torque certifier clamped in my Apex governor building vise.
Not the best setup but, hey — we are not a lab. I did have it recommended to me that I click three times before starting to test. This actually helped as the first couple were way off on every wrench. It also helped on the screw style adjustable wrenches to go past the setting and back down to it.

First up to be tested is a Skyway Precision ST750A1 200-800INLB Torque Wrench. Circa, probably older than me. It did carry US Army and Air force national stock numbers.

Set-225INLB Test 135-165-191-176
Set 450INLB Test 350-381-390-377
Set 700INLB Test 732-673-850- Torque Wrench Broke Into Pieces

Since I was in my Governor room, I grabbed my Genius 09F25 50-250 INLB torque wrench that I use in assembling governors. I needed a valid INLB test.

Set 70INLB Test 67-68-68-67
I laughed when I grabbed this old Beam type Craftsman Torque Wrench Model 44641 0-140FTLB. I had a preconceived notion that this was going to be a total piece of junk. I was just a pawn of the torque wrench lobby group that say you must have a clicker or one of those fancy new digital ones. **Total Peer Pressure.** This one really surprised me.

This is the Craftsman Accutorque. The laser etched part number is long gone. Unbelievable — of the 2 Craftsmans, the Beam won. I think Sears must have sold millions of these things.
K-Tool KTI72102 25-250FTLB. This one was used and not sure where it came to us from. During the testing of this wrench, I did find out that the holding strength of my two C-Clamps holding my vise was somewhere between 125FTLB and 220FTLBS because they failed before getting the third set of tests. After bouncing off my PT fuel pump test stand, I decided that this wrench only needed 2 ranges. But now I need to figure out how to erase this off the security camera system footage.

Set50FTLB Test 47-45-45-45

Set100FTLB Test 91-87-90-90

T&E T0250 50-250FTLB Brand New Torque Wrench. Since my back still hurts from flying into the test bench, this wrench also
I was going to call it a day after T&E but happened to spot my S&K Wrench under my bench. My employees make fun of me for my love of S&K. I think it comes from the only tools I had to work with growing up came from a Tent Sale in the local shopping mall or Fairgrounds. These tools were such quality that they came, set up, peddled their lifetime warranty tools and snuck away in the middle of the night before warranty claims started appearing. My first introduction to decent tools is when the S&K rep came around and convinced us to start selling hand tools as well as our Diesel Specialty items. The samples that he gave me turned me to a S&K lover for life. Finally a socket that does not explode if you pull on it with a breaker bar. And ratchets that do not blow a tooth and send you flying. Today was not my first experience bouncing off something when I had an equipment failure. Almost made me a little nostalgic.

Back to the Test ... S&K 74436 15-75FTLB

Set 25FTLB Test 24-22-22-22

Set 40FTLB Test 38-36-40-39

Set60FTLB Test 54-57-57-55
Final Conclusion: Older torque wrenches need to be calibrated or replaced. It is not in these tests to protect the guilty, you really get what you pay for in a torque wrench. I know I was testing a sample sent to us a few years ago and had it break on the second lug nut. Personally I have changed over to digital at home. Just remember to not store the batteries in the wrench.

And as always…. Happy Wrenching!

Fred Neff