# Torque Wrenches Explained

The Technology behind the Stahlwille 721, 730 & 730N series Torque Wrench.



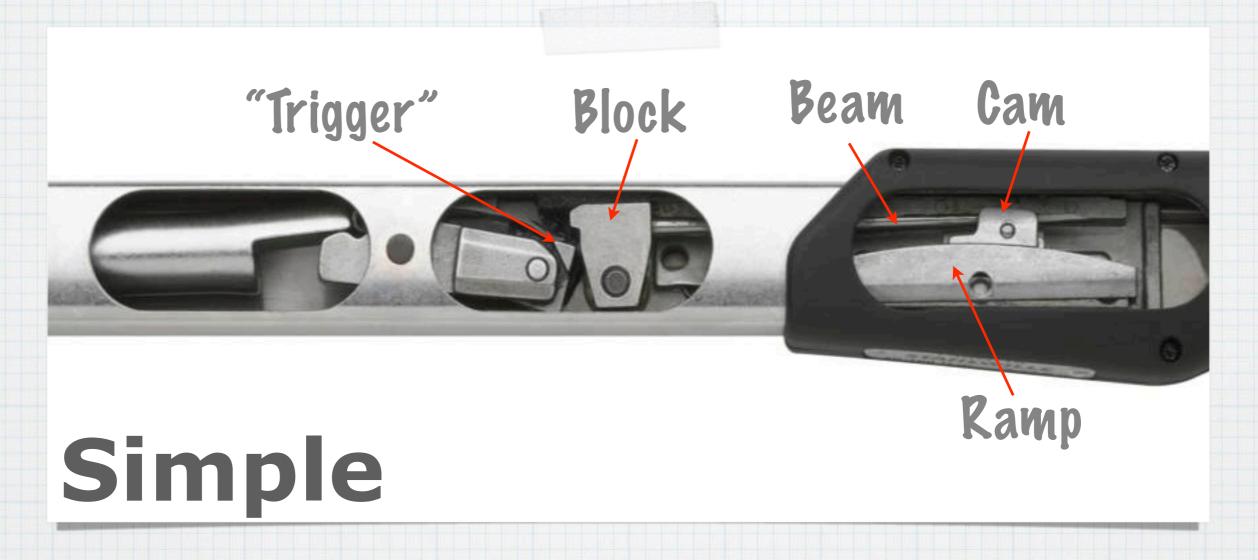
#### Machined Beam (the "spring")



## No need to Zero

- √ The beam remains at rest until torque is applied. 
  Nothing is under load.
- ✓ Maintains accuracy throughout the calibration cycle.
- √ Full visible range of the scale can be used.

  No loss of % at top or bottom of the indicated range.



As the cam moves up the ramp (when a torque value is selected) the beam tips the block up or down.

The closer to the block the cam moves the higher the torque value. (The more difficult for the trigger to slip past the block.)



# Longevity

It's a firing mechanism from a machine gun.
Rated to hundreds of thousands of clicks. (activations)

Stahlwille Torque Wrenches meet the ISO 6789 requirements for 12 months or 5,000 activation calibration cycles.

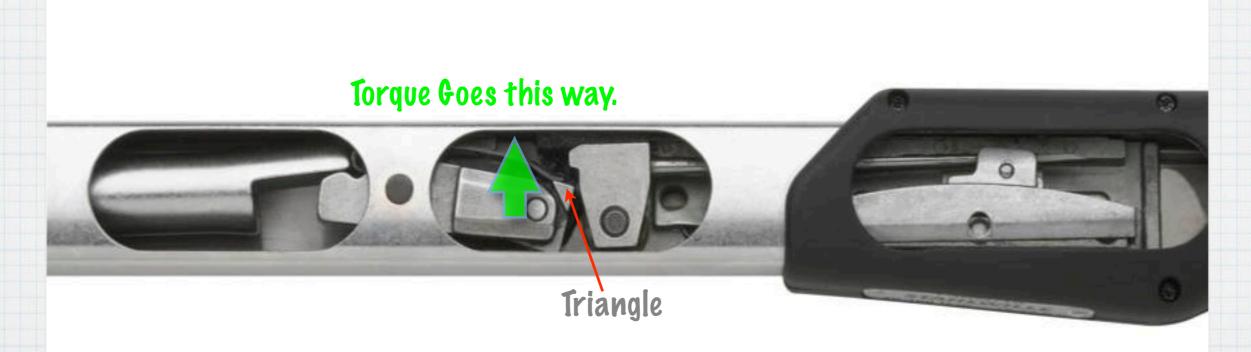
Stahlwille Torque Wrenches have held a one year calibration cycle with the USAF for over 3 1/2 years. (33K-1-100-1)



### Breaker Bar

Stahlwille torque wrenches are built to be used as Breaker Bars. The Insert head beam just moves off the Mechanism!

Using other torque wrenches as a Breaker Bar damages them. (Also ruins their accuracy).



# Over Torque Protection

After the small triangle passes the block it cannot move any further. It hits the wall of the wrench. No damage.

Over torque seriously damages other torque wrenches. (Also ruins their accuracy).



Once the ramp angle is calibrated it is "fixed."

Dropping has little effect on accuracy due to the design of the ramp mechanism.

50/50 chance that other torque wrenches are seriously out of cal and need repair or replacement if they are dropped. (Also ruins their accuracy).



No disassembly required to calibrate or adjust.

A 2 mm hex key is all that is necessary to adjust the wrench.



#### **Common Parts**

From 20 in.lb. to 725 ft.lb. with just five torque wrenches.

All five torque wrenches share the same components except for the measurement scale and labels.



- √ Cost effective. No need to buy extra torque wrenches. Simply add heads as needed.
- ✓ Reduce the number of wrenches to calibrate, track, and maintain. Same center point on most inserts.
- ✓ Perfect for LEAN implementations.
  (Build kits to specific processes.)