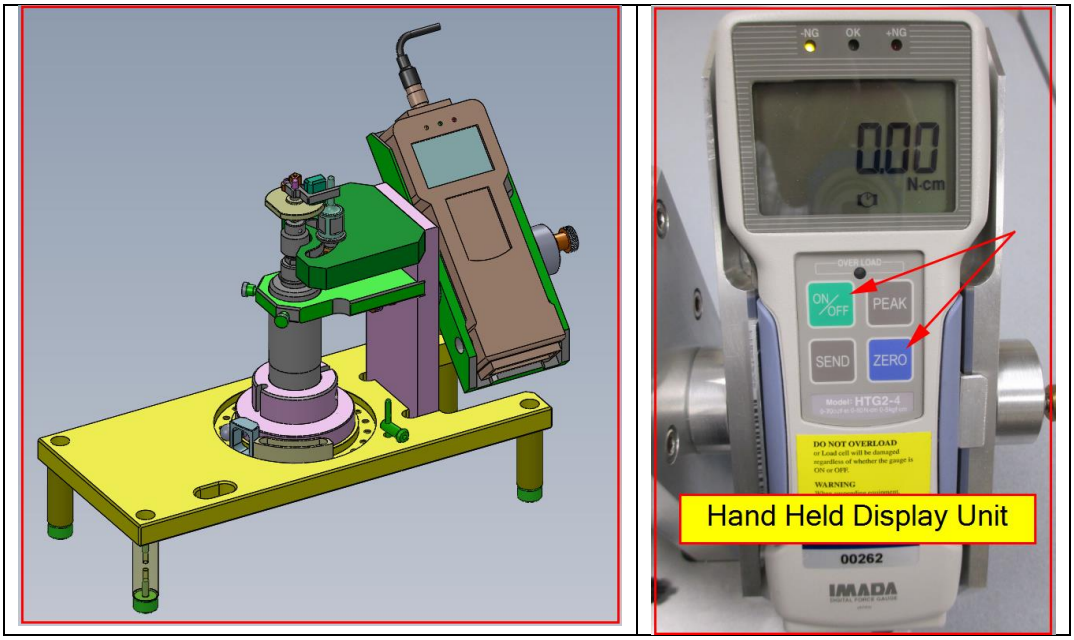
Quality Assurance Procedure

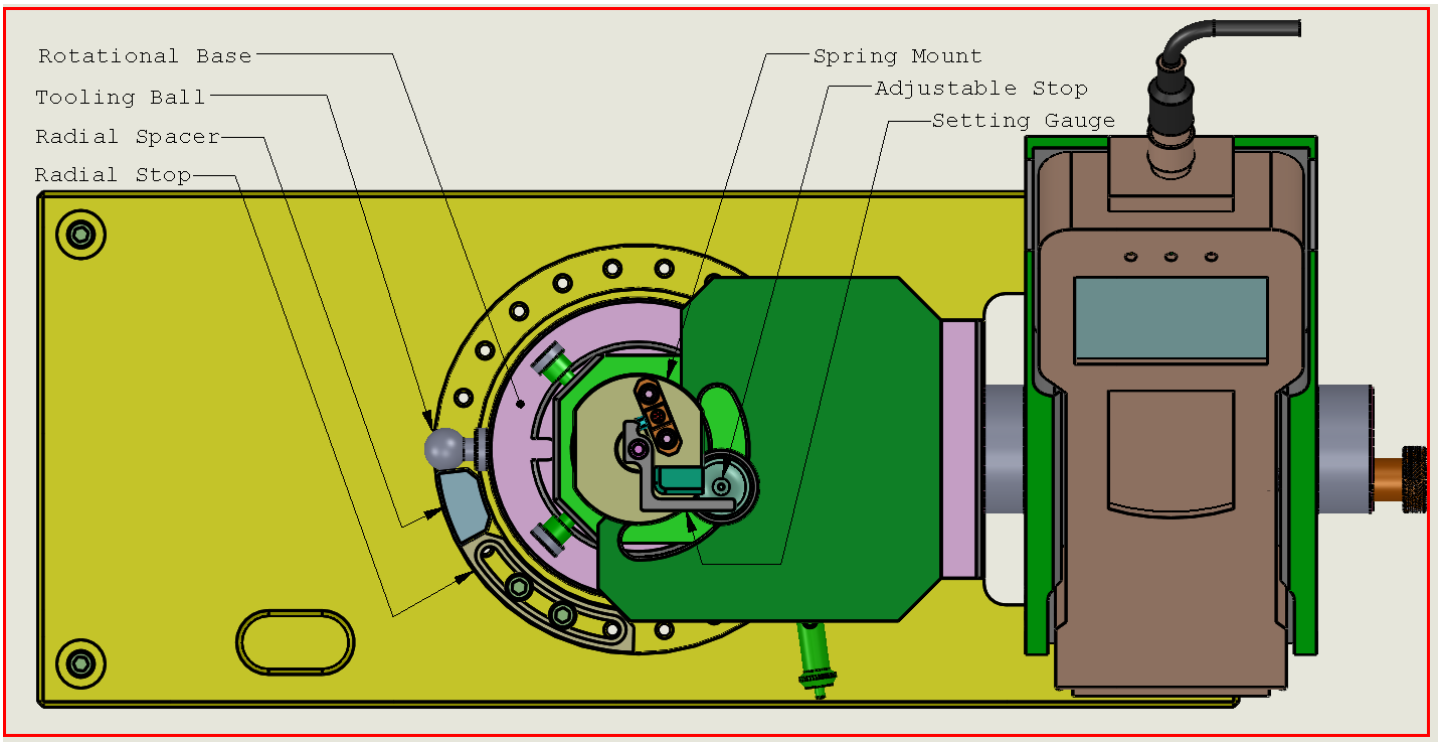
Spring DR-33832

Torque Requirements: 3.15 ±.15 N•CM

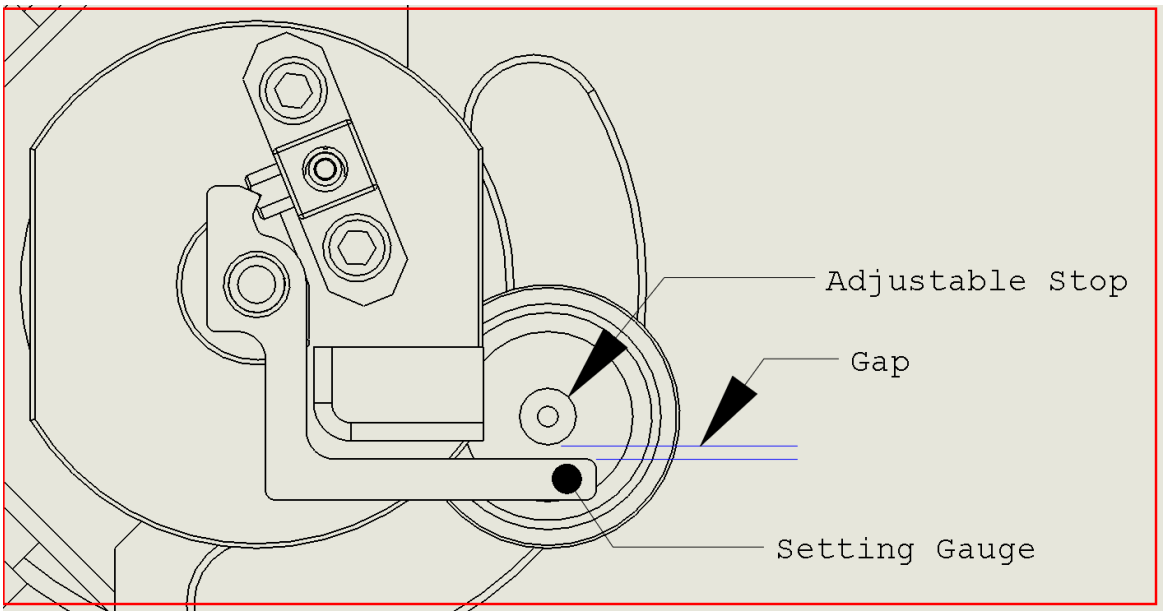
Calibration Procedure: Spring Torque Fixture



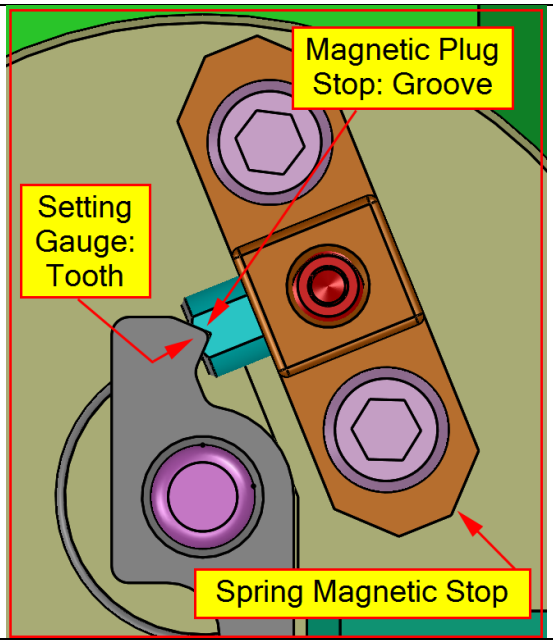
Turn on the Hand Held Display Unit via the ON/OFF button, and with no force being applied zero it out via the ZERO button.

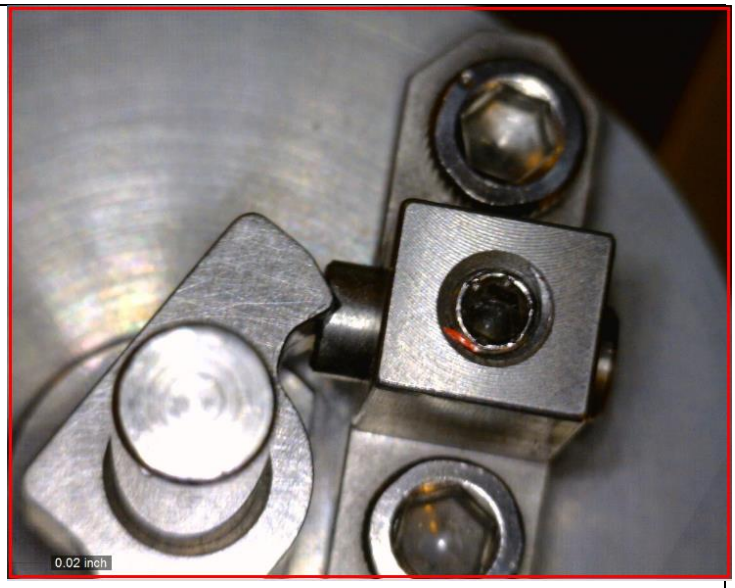


Orient the parts approximately as shown.

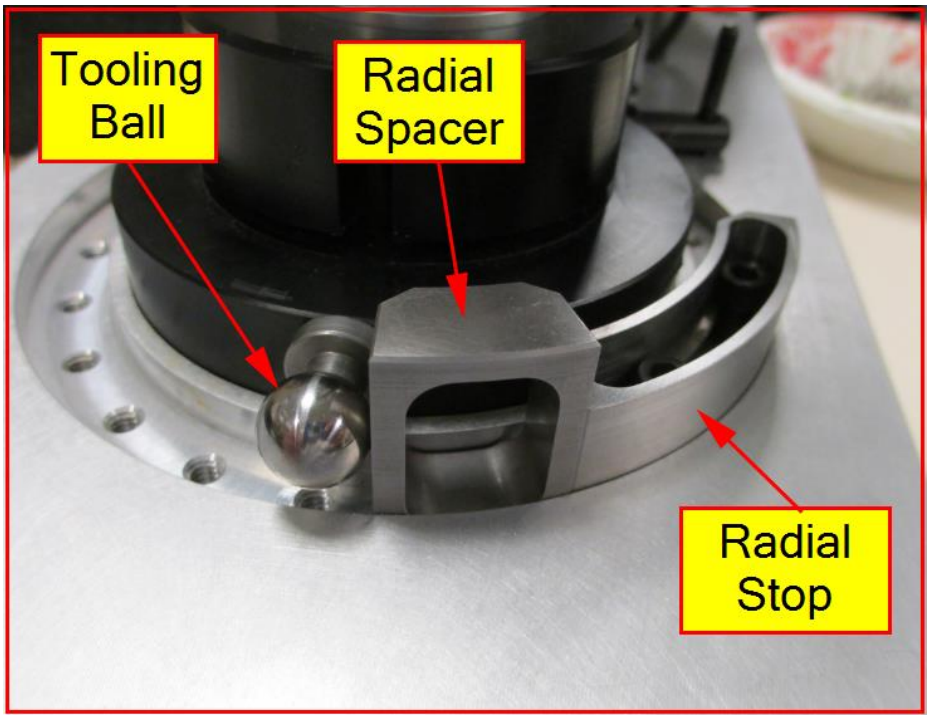


Leave a gap of approximately 1/16”

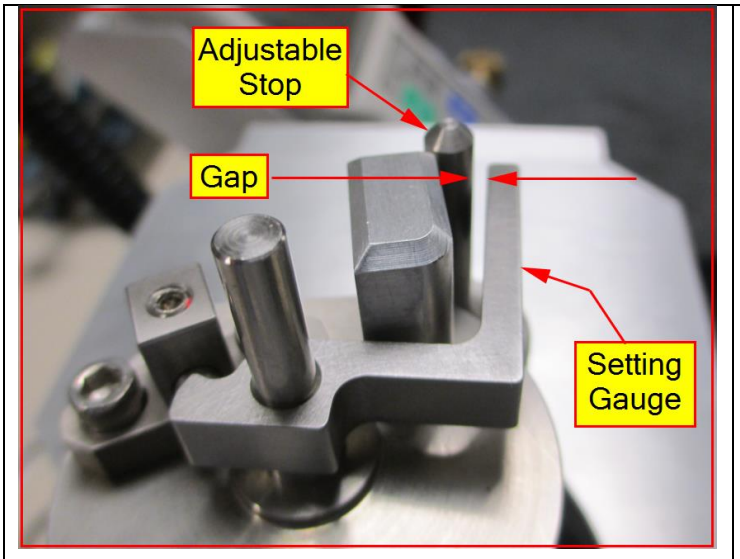


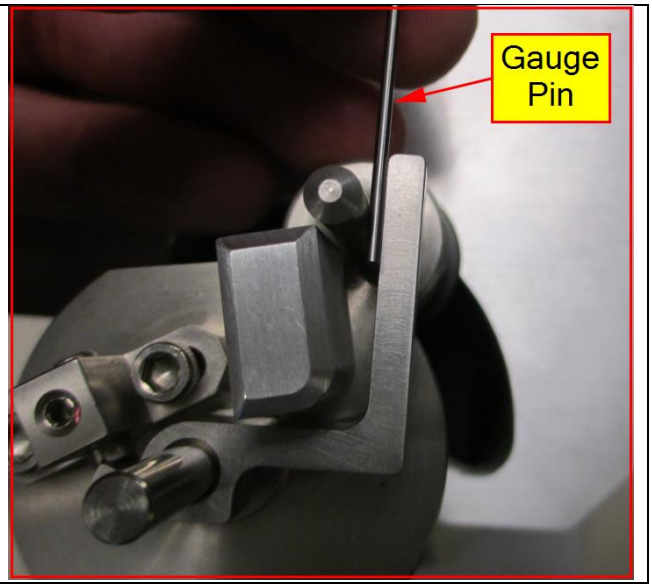


Ensure that the tooth of the Setting Gauge is rotated clockwise into being flush within the groove of the Magnetic Plug Stop. Adjust the Spring Magnetic Stop as required to achieve this fit.



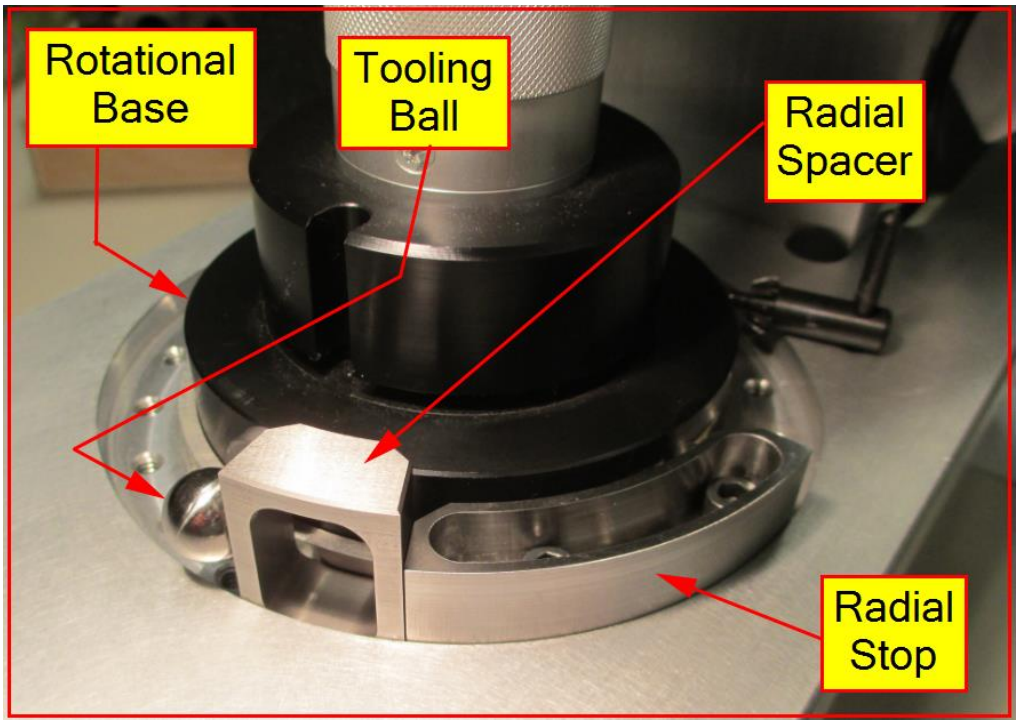
Ensure that the Radial Spacer is firmly sandwiched between the Tooling Ball and the Radial Stop before each gap measurement. The gap will be measured with gauge pins.





Gap: .045" ±.005

With gauge pins, measure the width of the gap between the Adjustable Stop and the Setting Gauge. Caution: Technique is very important in measuring this gap. Be observant. If a pin makes contact on both sides, do not force it thru, as even a little force will make the Setting Gauge rotate away. A Ø .050 pin (the "NoGo" pin) should contact on both sides, and a Ø .040 pin should contact only one side at the most. If a pin is being forced thru, contacting both sides, the Hand Held Display Unit will register it as a force.

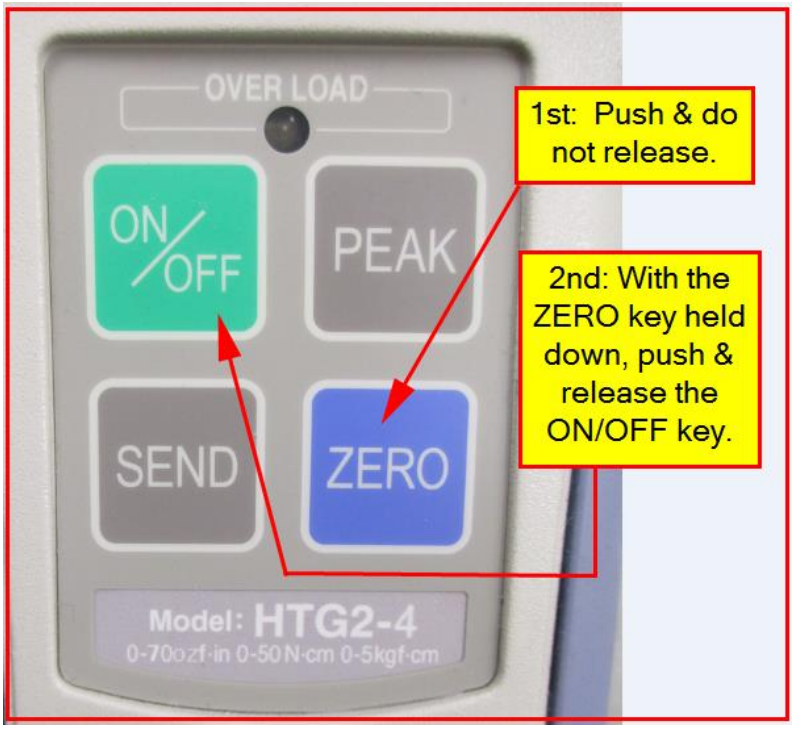


If the gap width needs adjusting, loosen the Radial Stop & slide it CW or CCW, re-tighten, then rotate the black Rotational Base to once again firmly sandwich the Radial Spacer between the Tooling Ball and the Radial Stop. Then re-check the gap with gauge pins.

Spring Inspection Procedure: Setting the Hand Held Display

Setting the Units on the Torque Gauge

Make sure the Hand Held Display is turned OFF via its ON/OFF button.



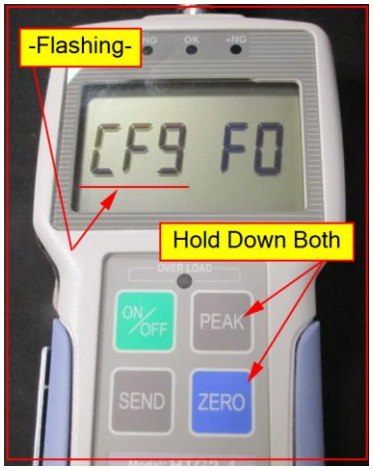
- Push and continue to push in the ZERO key.
- With the ZERO key still pushed in, now push & release the ON/OFF key.
- "CF9" should be flashing to the left of some other characters on the screen.

Push & release the SEND button until the display shows "U-02" with N•cm below it.

Then press SEND again and "CF9" will flash to the left of "END".

Then press ON/OFF to shut off the Hand Held Display. The units you picked will now become the default units at start up.

Setting the HIGH and LOW Setpoints



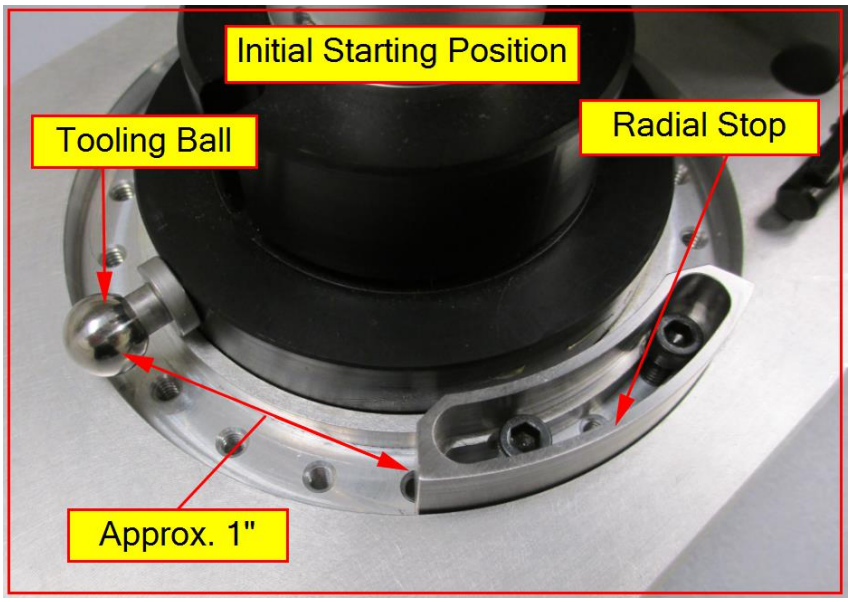
Turn on the Hand Held Display. Then press & hold both the PEAK and the ZERO buttons together for about 3 seconds until the display shows "CF9" flashing to the left of "FO".

Press PEAK to show a flashing "CF9" to the left of "F1".

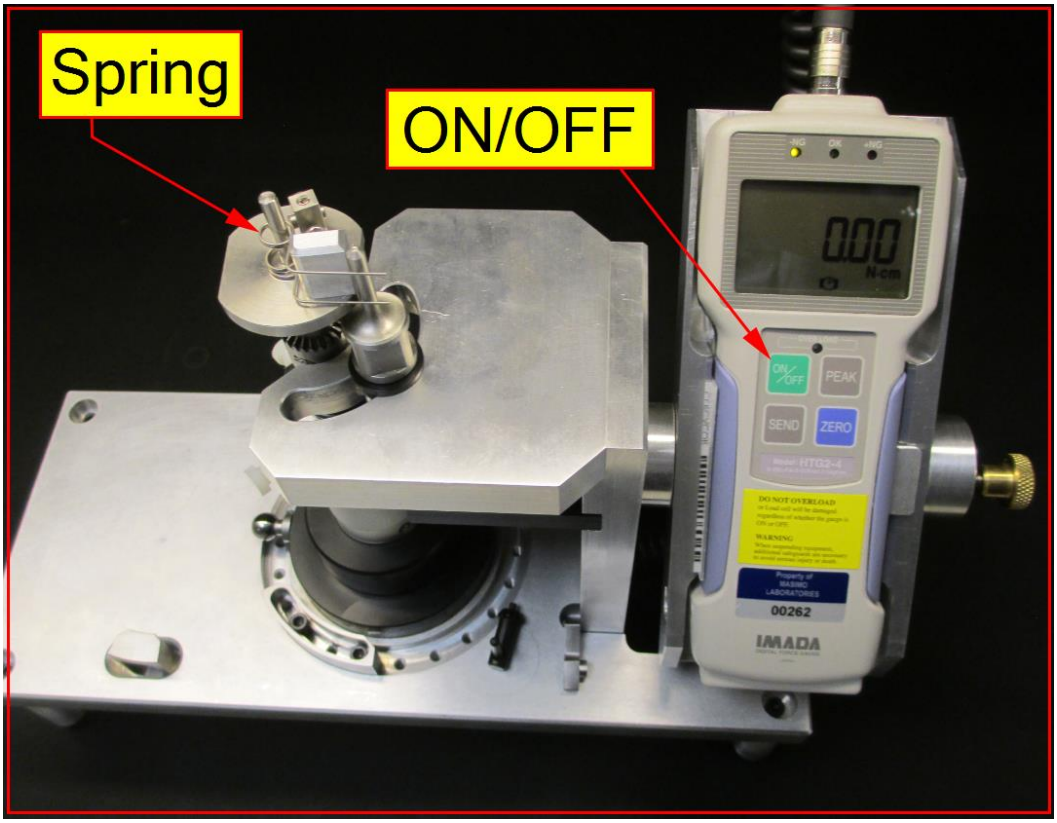
Press the SEND button and the display will show the current high set value, as indicated by the "H". In this example, that value is currently at 3.30 N-cm.

- INCREASE the value via the PEAK button.
- DECREASE the value via the ZERO button.
- When finished setting the High Set Point (see graphic above), press SEND to set the Low Set Point. The display will now show an “L” in place of the “H” seen above, in anticipation of you next setting the Low Set Point.
- Press the PEAK or ZERO buttons to adjust the Low Set Point.
- When done, press the SEND button twice to exit the Set Point mode.

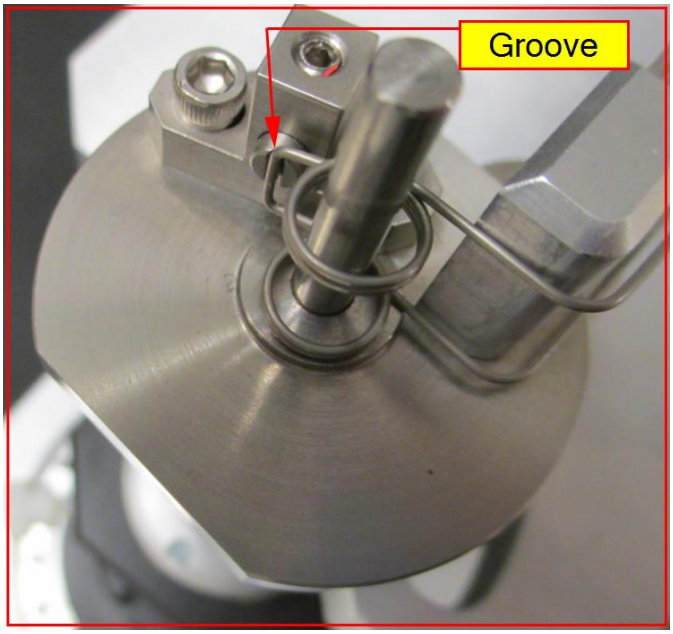
Spring Inspection Procedure: Inspecting a Spring

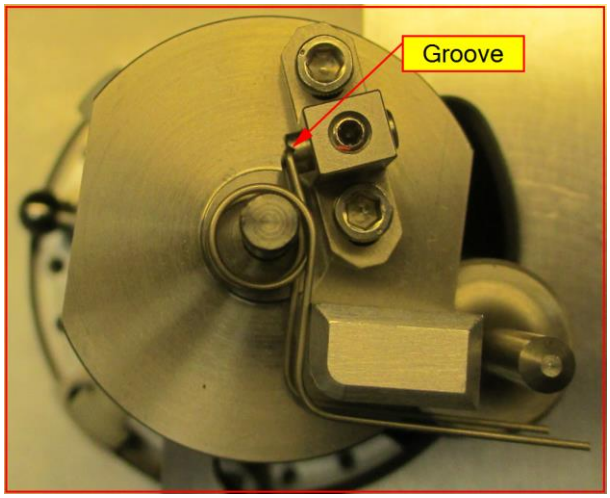


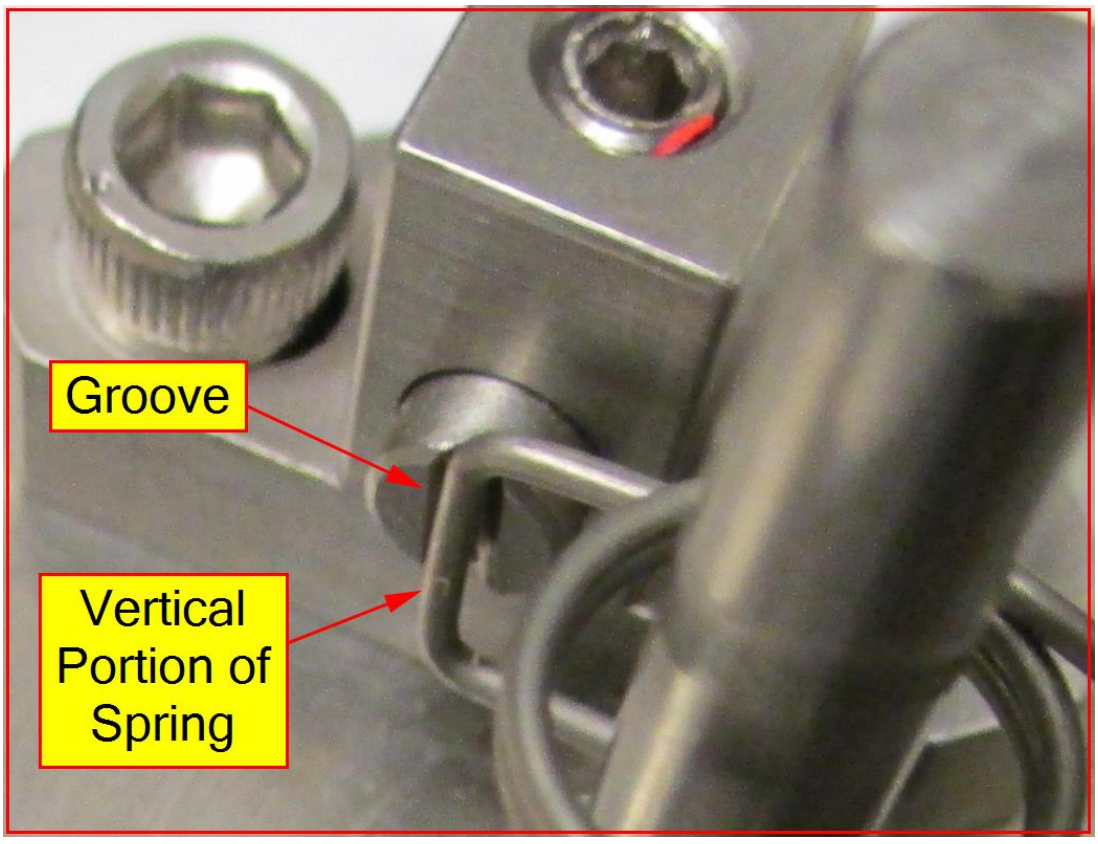
Start with the Tooling Ball approximately one inch away from the Radial Stop.



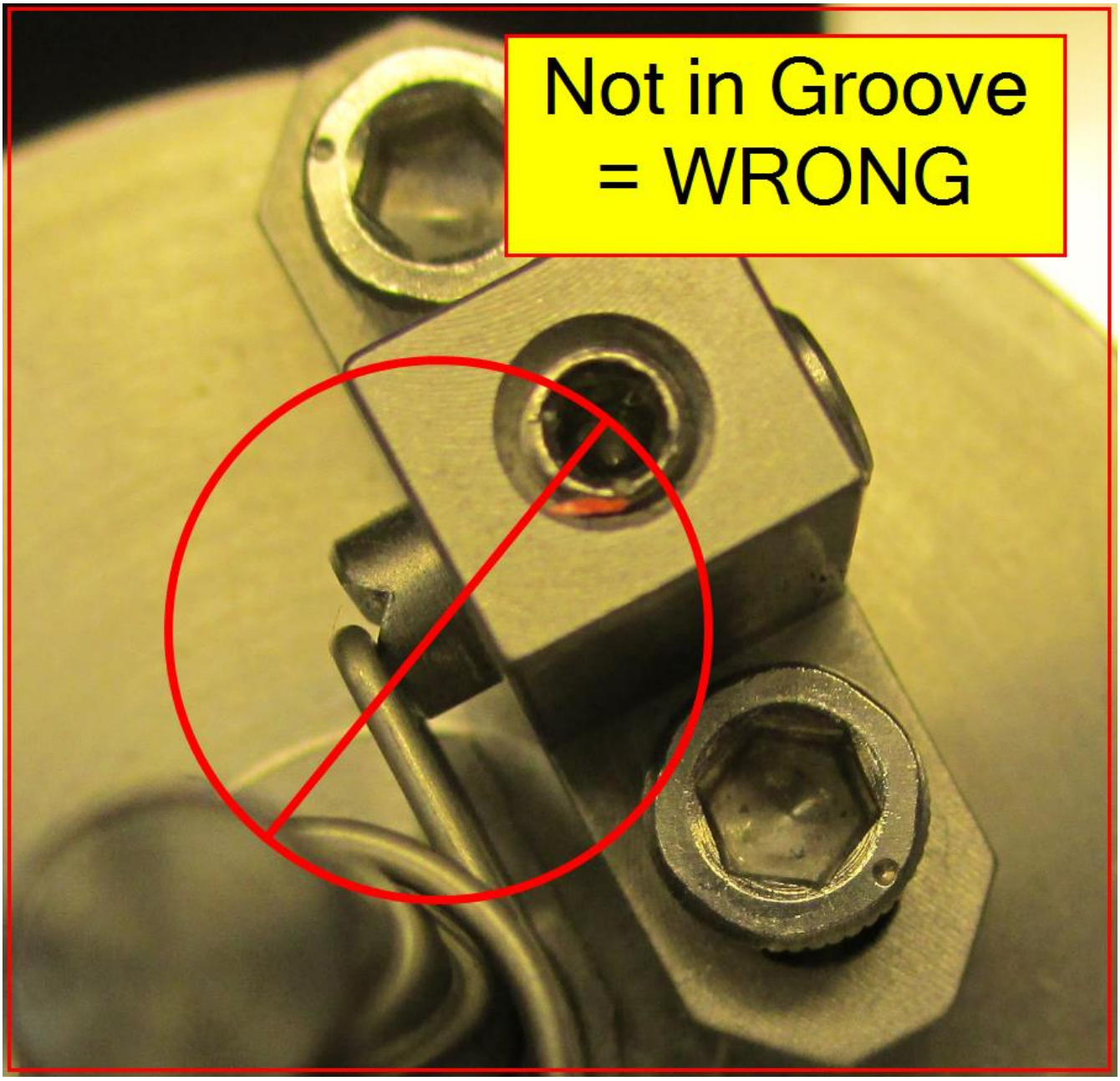
Turn the Hand Held Display on via its ON/OFF button. Insert the Spring as shown.



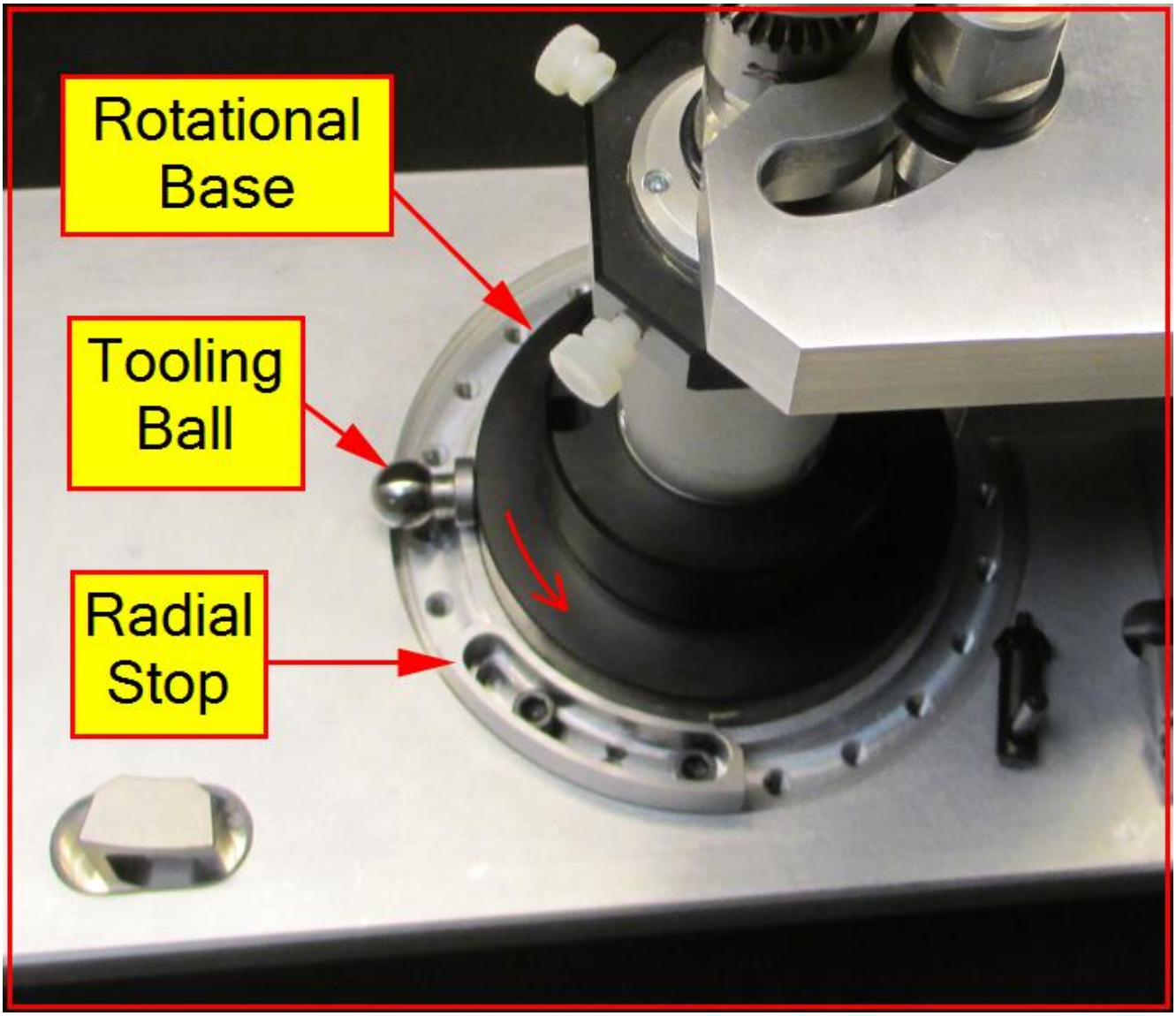




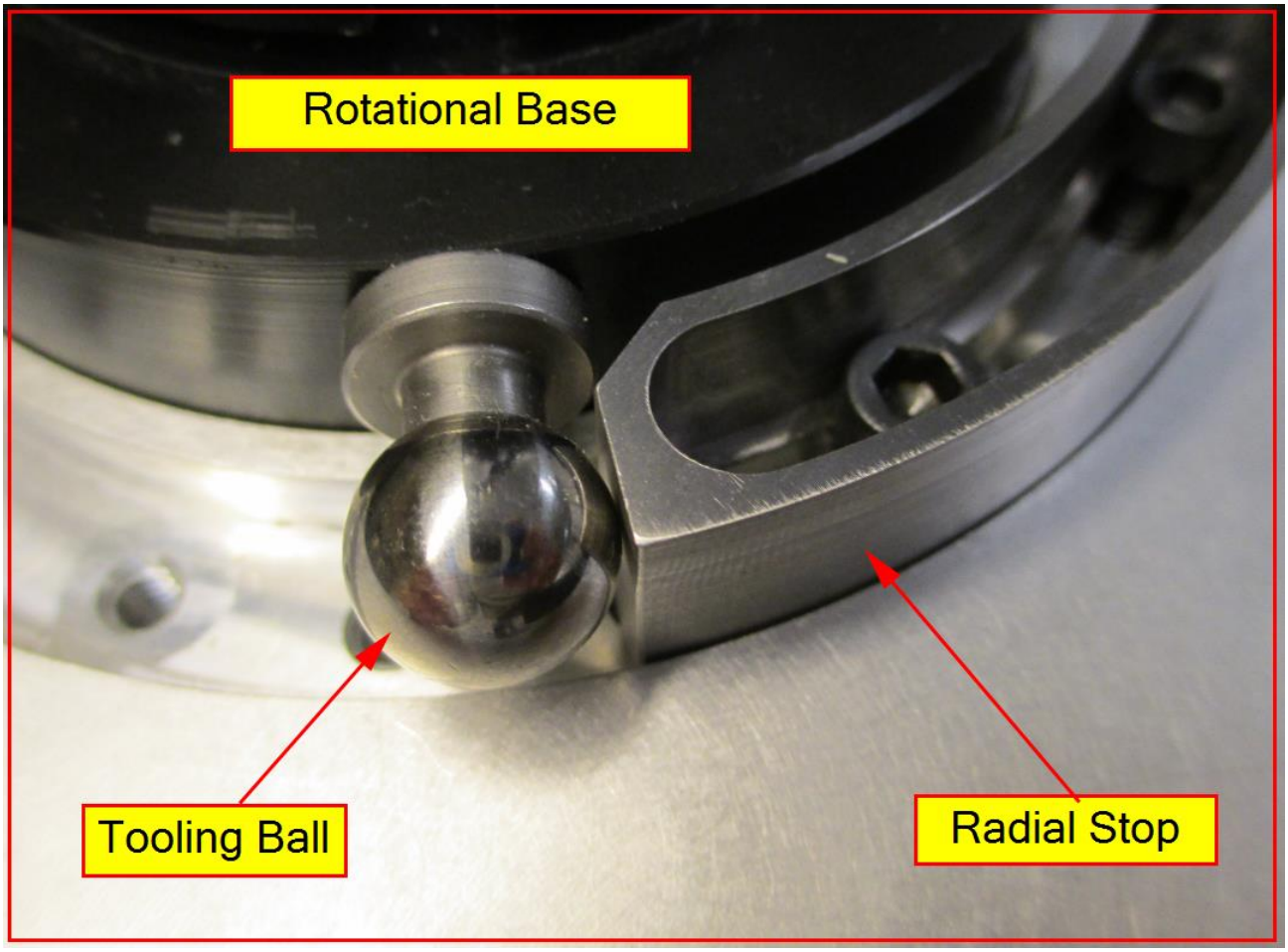
Ensure that the vertical portion of the Spring is in the Groove, as shown in these graphics.



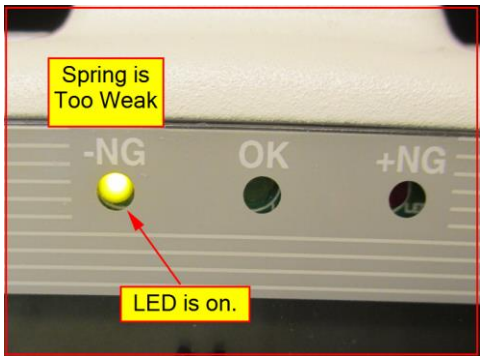
If the vertical portion of the Spring is not in the groove, adjust the Spring until it is. If you can not get the vertical portion of the Spring into the groove, reject the Spring.



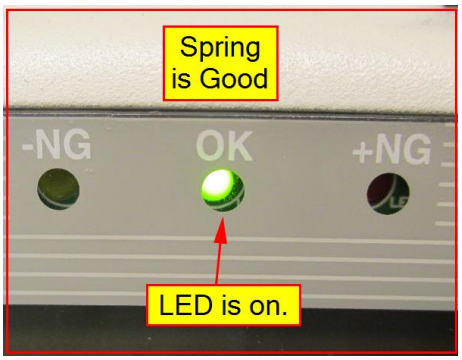
Gently rotate the Rotational Base CCW until the Tooling Ball comes into contact, and stays in contact, with the Radial Stop.



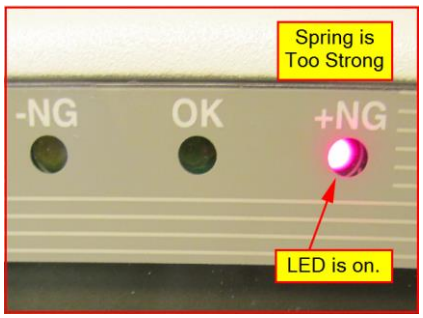
Tooling Ball shown in good contact with the Radial Stop



Reject this Spring



Accept this Spring



Reject this Spring

With the Tooling Ball held firmly against the Radial Stop, look at the three LED's at the top of the Hand Held Display. If the Spring is too week or too strong, reject it. If the Spring is good, accept it.