

# ROTARY SHOULDERED CONNECTION- External Taper



## External Taper Gage- ET-7000 Series

### Purpose:

The ET-7000 Series of gages inspect variations in connection taper of external threads. Each model covers a specific range of connection sizes, making the ET-7000 gages very versatile and economical. The ET-7000 Series use precision contact points that seat in the thread of the part during inspection. The gage's indicator reports actual measurement readings. Each set of contact points is interchangeable to allow measuring different thread forms.



ET-7000 Series

## External Taper Inspection with ET-7000 Series

### Gage Setup

1. Determine the size of contact points to be used, by the pitch of the thread and type of thread form being inspected.

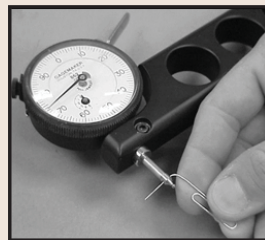


2. Using calipers, verify the size of the contact point.

3. Screw one contact point into the upper arm of the gage and the other contact point into the lower arm.



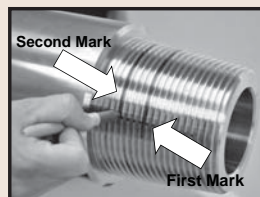
4. To secure the contact points, open a paper clip and insert it into the hole in the contact point's shaft. Rotate, using moderate pressure, to tighten the contact point.



**\*Do Not** use pliers to tighten the contact points, as damage may result.

### Gage Operation

1. Using a marking pen, draw one full revolution on the threads of the part being measured, starting at the first perfect thread.



2. Mark another full revolution on the threads of the part one inch back from the first mark.

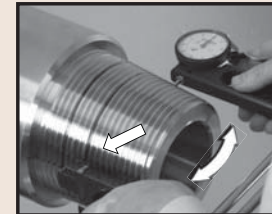
3. Using a 3/16" hex wrench, loosen the capscrews on the lower arm.



### Gage Operation (Continued)

4. Slide the lower arm of the ET-7000 gage open enough to fit over the part, and then tighten the lower arm cap screws to secure.

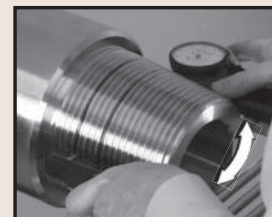
5. Press the indicator retraction lever and seat the contact points in the first marked thread.



6. Use the lower arm as a pivot, sweep the upper contact point side to side to locate the largest indicator reading.



7. Turn the indicator dial on the ET-7000 gage to align the needle with zero and tighten the indicator clamp.



8. Remove the gage from the first marked thread and insert into the second marked thread.

9. Use the lower arm as a pivot, sweep the upper contact point side to side to locate the largest indicator reading.

10. Record the deviation on an inspection or calibration report.