

# TUBING & CASING THREAD INSPECTION- Thread Lead



## Thread Lead Gauge- LG-5000 Series

### Thread Lead:

Thread lead is the distance between threads, measured on a plane that is parallel to the centerline of the threaded part.

### Purpose:

The LG-5000 Series of gauges inspects both internal and external thread lead using two contact points that seat in the threads of a part. One fixed contact point at the rear of the gage and one moveable contact point at the front of the gage provide complete stability when taking thread lead measurements.



## Thread Lead Inspection with LG-5000 Series

### Gage Setup

1. Determine the size of the contact points to be used, by the pitch of the thread being inspected. Refer to the table below for selecting the proper model contact point for API threads.

*Tubing Casing & Pipe Threads*

Connection Type	Point Diameter	Thread Pitch	Contact Point Model Number
API Tubing, Casing and Line Pipe	0.072"	8	T072
Buttress Casing - Lead	0.062"	5	T062
API Tubing and Line Pipe	0.057"	10	T057
API Line Pipe	0.050"	11 ½	T050
API Line Pipe	0.041"	14	T041
API Line Pipe	0.032"	18	T032
API Line Pipe	0.021"	27	T021

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



3. Install one contact point into the moveable point holder at the front of the gage.



4. Determine the location for the other contact point based on the interval of lead required for the inspection. The increments in the lead gage are set at ¼" intervals from 1" – 4".

5. Install the remaining contact point into the proper hole.



6. Once installed, insert a paper clip into the hole in each contact point and tighten.



### Gage Operation

1. After zeroing the lead gage on the standard, seat the rear contact point into the first full thread.



2. Tilt the gage forward to seat the moveable contact point into the thread.



3. Apply pressure to the nose of the gage with the index finger. Do not apply excessive force to the gage, just enough to keep the moveable point in contact with the thread flanks. Then, using the rear contact point as the pivot point, sweep the gage to locate the shortest distance.



4. Record any deviations on an inspection or calibration report.

5. Use the first part you inspected as a control piece to verify repeatability. Mark the part at the location where it was inspected and record the deviation from zero.

6. During the inspection process, periodically place the lead gage on the standard to verify the gage's repeatability.