

STRAIGHT THREAD INSPECTION- Thread Lead



Thread Lead Gage- 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 gages 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.



Standard

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 tables below for selecting the proper model contact point.

UN Series (60° "V") Threads

Model	Thread Pitch	Model	Thread Pitch	Model	Thread Pitch
T562	1	T115	5	T050	11½ & 12
T288	2	T105	5½	T041	14 & 16
T188	3 & 3½	T096	6	T032	18
T144	4	T072	8		
T128	4½	T057	10		

Acme or Stub Acme Threads

Model	Thread Pitch	Model	Thread Pitch	Model	Thread Pitch
T531T	1	T144T	3½	T050T	10
T344T	1½	T128T	4	T041T	12 & 14
T266T	2	T105T	5	T032T	16
T219T	2½	T090T	6 & 7		
T188T	3	T062T	8		

7° x 45° Buttress Series Contact Points

Model	Thread Pitch	Model	Thread Pitch	Model	Thread Pitch
T562	1	T188	3	T072	8
T437	1¼	T156	3½	T057	10
T375	1½	T144	4	T050	12
T281	2	T115	5	T032	16 & 18
T219	2½	T096	6		

Trapezoidal Thread Contact Points

Model	mm Pitch	Model	mm Pitch
T144	7	T062	3
T125	6	T050	2½
T096	5	T041	2
T062	4	T032	1½
T072	3½		

ISO Metric Series Contact Points

Model	mm Pitch	Model	mm Pitch
T096	4	T057	2½
T072	3 & 3½	T041	1½, 1¾, & 2

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".

Setup (Continued)

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.

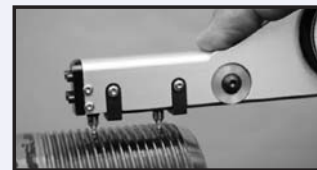


Gage Operation

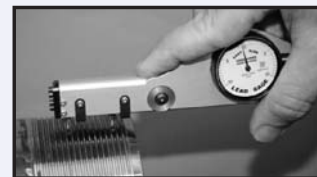
1. After zeroing the lead gage on the standard, seat the rear contact point into the first full thread.



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.