



Thread Lead

Lead Gages

The lead gage inspects thread leads using contact points that seat in the threads of a part. Thread lead is the distance between threads, measured on a plane parallel to the centerline of the threaded part. The pitch of the thread determines the diameter of the contact points required for taking measurements. API Specification 7-2 requires thread lead inspection.

The **LG-5001** and the **LG-5002** use a two-point system to inspect thread lead for straight and tapered threads. The **LG-5001** inspects external threads, while the **LG-5002** inspects both external and internal threads. The two point system allows for a sweeping action to obtain the measurement.

The **LG-5003** uses the three-point system to inspect internal and external thread lead. Two fixed contact points 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. This unique design does not require sweeping to obtain measurements.

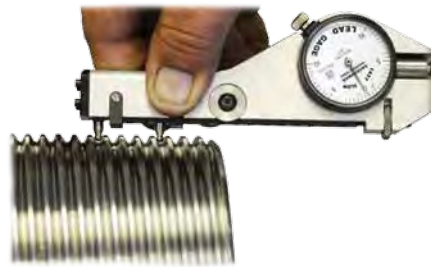
Contact points can be easily changed to allow the gage to be used on a variety of thread forms.

Before inspecting parts, the lead gage must be preset to a nominal predetermined dimension using a lead gage setting standard. Lead standards are available for both straight and tapered threads. Our setting standards are manufactured according to ANSI and API specifications, respectively.

Please see pages 124-125 for contact points. See page 121 for standards.

Features

- Uses a three-point system for greater stability when inspecting parts (LG-5003).
- Uses interchangeable contact points to allow inspection on a variety of thread forms.
- Requires presetting using Gagemaker's lead gage setting standards.



LG-5002



LG-5003



LG-5003-L

Model	Description	Minimum Bore	Range
LG-5001	External Lead Gage 2-point	1.200	1/2" - 2" Thread Length
LG-5001-1	External Lead Gage 2-point, .0001" grad. indicator	1.200	1/2" - 2" Thread Length
LG-5002	Lead Gage 2-point	1.200	1/2" - 4" Thread Length
LG-5002-1	Lead Gage 2-point, .0001" grad. indicator	1.200	1/2" - 4" Thread Length
LG-5003	Lead Gage 3-point Contact point spacing .500"	1.340	1/2" - 4" Thread Length
LG-5003-1	Lead Gage 3-point, .0001" grad. indicator, Contact point spacing .500"	1.340	1/2" - 4" Thread Length
LG-5003-J	Lead Gage 3-point, Contact point spacing .193"	1.340	1/2" - 4" Thread Length
LG-5003-1J	Lead Gage 3-point, .0001" grad., Contact point spacing .193"	1.340	1/2" - 4" Thread Length
LG-5003-L	Special Load-to-Load lead gage	1.500	1/2" - 4" Thread Length
LG-5003-S	Special Stab-to-Stab lead gage	1.500	1/2" - 4" Thread Length

Lead Gage Setting Standards

Gagemaker's precision lead gage setting standards are manufactured in accordance with ANSI Specifications, API Specification 5B, and API Specification 7-2. Lead gage standards are used to set the gage prior to inspection.

Model	Connection Type/Description	TPF*	TPI*
LS-1001	API 8-Round Casing, Tubing & Drill Pipe, All 10-Round Tubing	¾"	8 & 10
LS-1002	Straight Threads, 6 - 18 Pitch, 4" Length	Straight	8 & 10
LS-1003	11½" "V" API Line Pipe	¾"	11½
LS-1004	Straight threads, Line pipe	Straight	11½
LS-1005	API Buttress Casing, Internal/External 4½" - 13¾"	¾"	5
LS-1006	API Buttress Casing, Internal/External 16" - Larger	1"	5
LS-1007	6½" API Reg 4", 5½", & 6½" API Full Hole 2¾", 3½" - 5" Hughes Xtra Hole 2¾", 2¾" - 4½" Hughes Slim Hole 2¾" - 5½" API INT Flush API Numbered Connections #23-#50	2"	4
LS-1008	5½", 7¾" - 8¾" API Reg API Numbered Connections #56 - #77	3"	4
LS-1009	2¾" - 4½" API Reg 3½", 4½" API Full Hole	3"	5
LS-1010	API Numbered Connections #10, #12, #13, #16 M.T. (Macaroni Tubing) 2¾" - 3½" PAC 2¾" - 4" American Open Hole	1½"	4
LS-1011	3½" - 6½" Hughes H-90	2"	3½
LS-1012	7" - 8¾" Hughes H-90	3"	3½
LS-1013	2¾" - 3½" Slim Line H-90	1¼"	3
LS-5001	Straight Threads, 1-5 pitch, 4" length		
LS-5002	Straight Threads, 6-18 pitch, 4" length		

*TPF = Taper Per Foot, TPI = Threads Per Inch



LS-1005

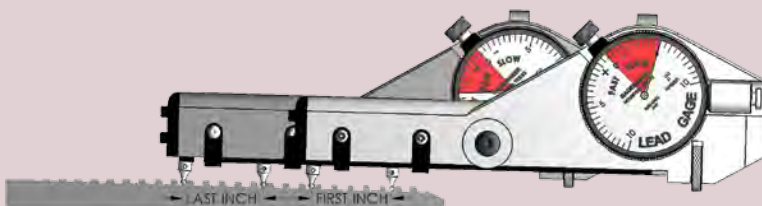


LS-5001

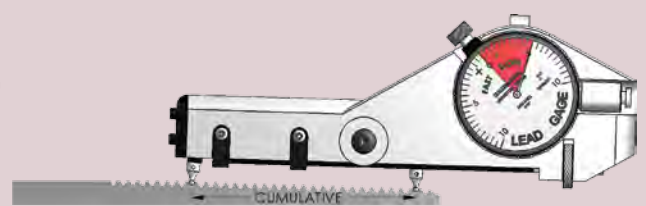


LS-5002

Lead is measured in one inch intervals. As shown below, the cumulative lead interval is the total measured distance from the first to the last thread.



LG-5002 in Last and First Position



Cumulative