

GAGEMAKER

TH-3000 Series
Internal Thread Height Gage
OPERATION MANUAL



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Congratulations! Your decision to purchase a Gagemaker product above all others on the market demonstrates your confidence in our quality and workmanship.

To ensure the high performance and operation of our product, we urge you to use the included reference materials. They contain important information for proper setup and use of the equipment. Also, we recommend that you follow the care and maintenance tips in this manual to keep the equipment working in top condition.

If your questions have not been addressed in our reference materials, contact your local representative or a customer service representative at 713-472-7360.

Introduction

The TH-3000 gages inspect variations in internal thread height of a variety of threads forms. All of the gage models, TH-3004, TH-3006, TH-3008, TH-3009, and TH-3010 use a precision contact point that seats in the thread of the part during inspection. The gages are supplied with various anvil configurations to fit the particular thread form being inspected. It is important to select the proper thread height gage for your particular application.

Before inspecting parts, some of the TH-3000 gages require zeroing on a setting standard. Once zeroed, the anvil of the gage is positioned on the crests of the thread, while the contact point is located in the thread root. The gage is properly positioned by sweeping to obtain the shortest depth location reading. The gage's indicator reports actual variations from the nominal setting dimension. These gages are supplied with a balanced indicator dial, normally reading 0-25-0 or 0-50-0.

For those models that do not require a setting standard, the gage is preset on any flat surface, and then applied to the product. The actual thread height displays on the gage's indicator. These gages are supplied with a continuous reading indicator dial, normally reading 0 -100.

Technical Support

Phone: 713-472-7360

Hours: Monday – Friday 8AM – 5PM (CST)

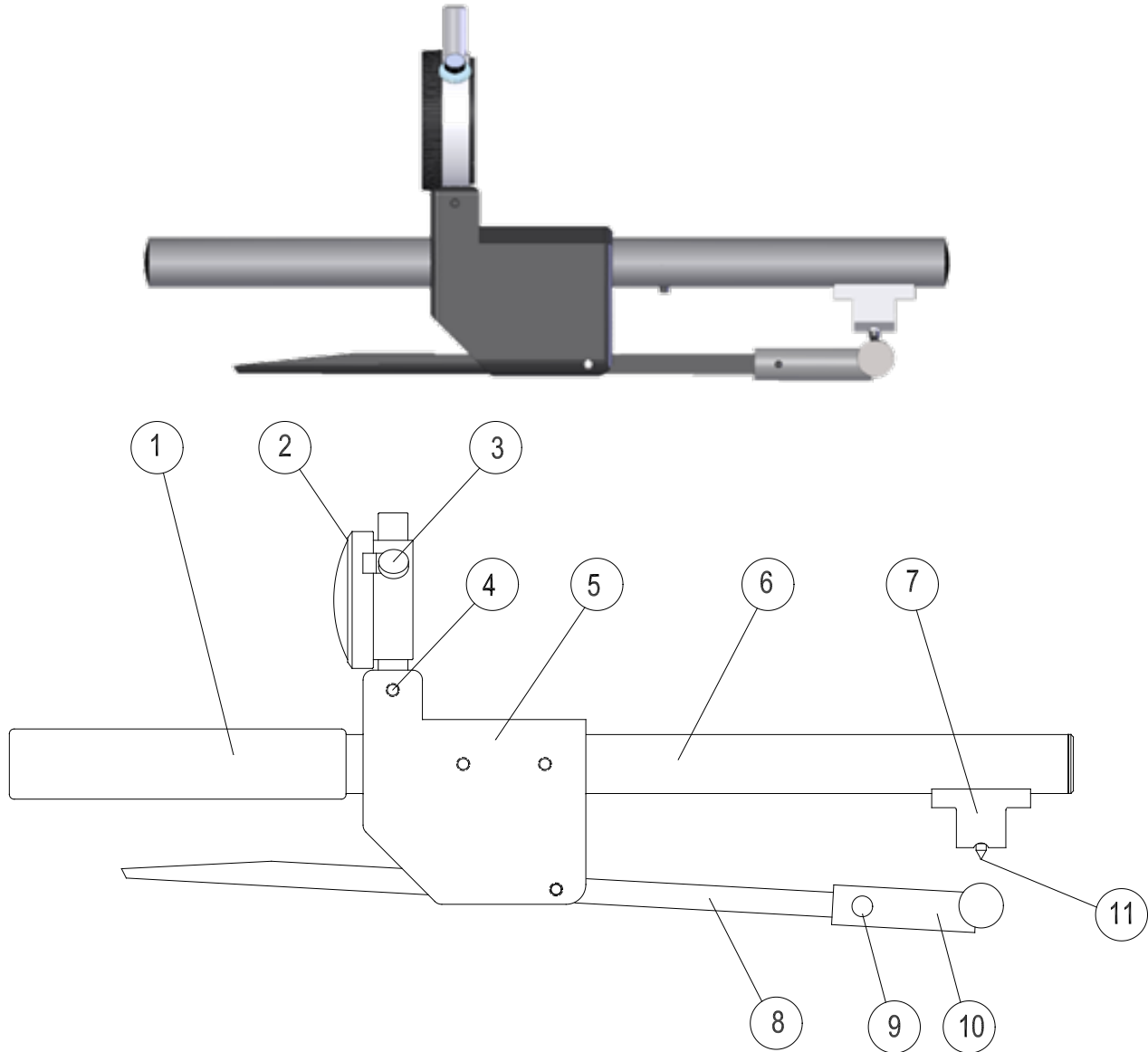
Product Information and Updates

Visit our web site at: www.gagemaker.com

Parts List

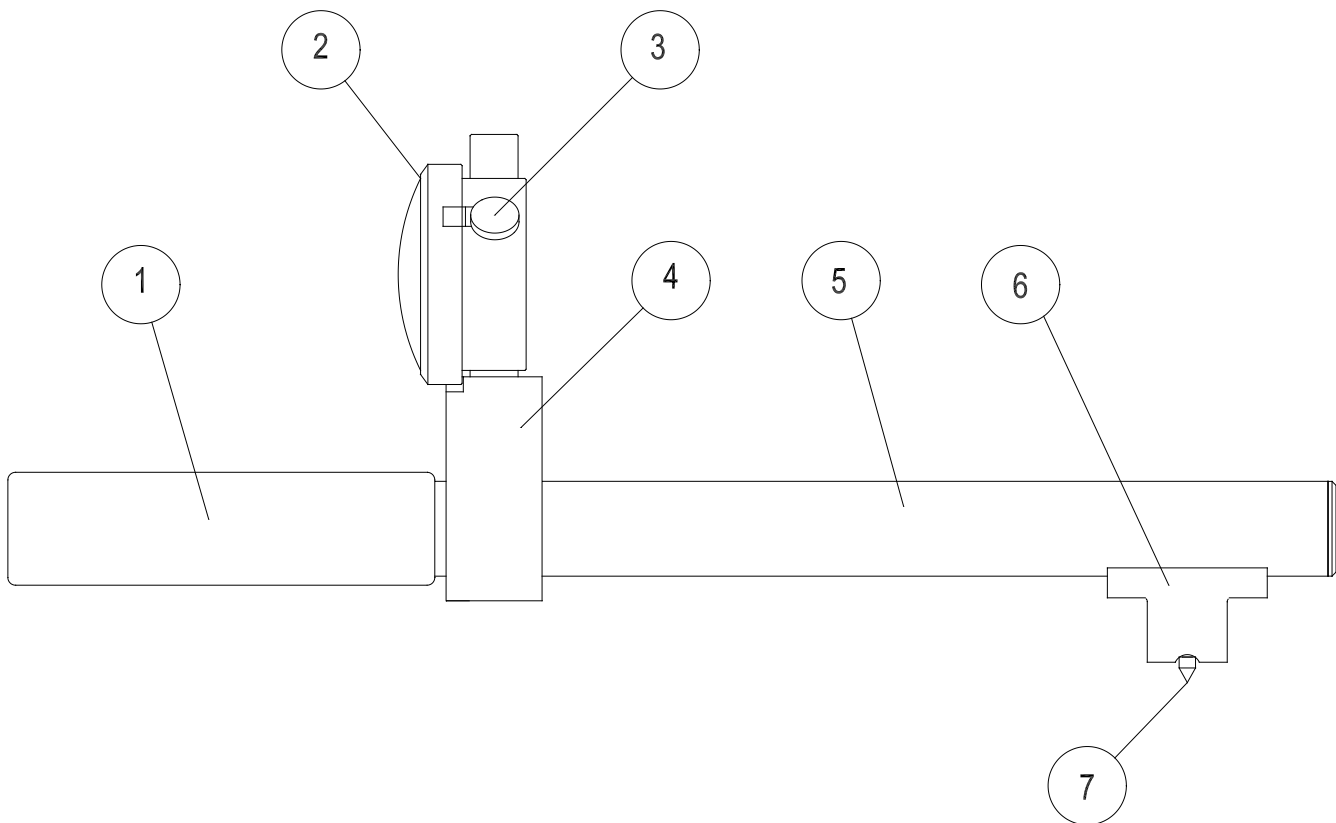
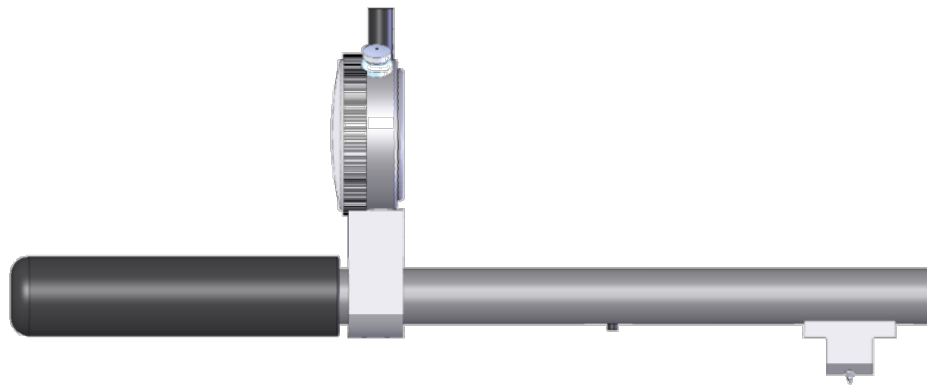
Take some time to become familiar with all the parts that make up the TH-3000 gages by reviewing the labeled diagram below. The part names are important for understanding the operating instructions.

TH-3004, TH-3006 Model Gages



Item	Description	Part Number	Qty	Item	Description	Part Number	Qty
1	Handle (optional)	8-0-016	1	7	Anvil	4-0-901	1
2	Indicator	863	1	8	Clamp arm	4-0-889	1
3	Indicator bezel clamp	21RZA065	1	9	Thumbscrew	N/A	1
4	Indicator set screw	#10-32 x .25	1	10	Clamp sleeve	4-0-891	1
5	Gage body	4-0-900	1	11	Contact point	T503	1
6	Gage extension tube	4-0-907	1				

TH-3008, TH-3009, TH-3010 Model Gages



Item	Description	Part Number	Qty	Item	Description	Part Number	Qty
1	Gage handle	8-0-016	1	6	Anvil (Model TH-3008)	4-0-902	1
2	Indicator	863	1	6	(Model TH-3009)	4-0-901	1
3	Indicator bezel clamp	21RZA065	1	6	(Model TH-3010)	4-0-903	1
4	Indicator block	4-0-899	1	7	Contact Point (TH-3008)	T503	1
5	Gage extension tube	4-0-907	1	7	Contact Point (TH-3009)	T072	1
				7	Contact Point (TH-3010)	T500C	1

Set Up Procedures

TH-3000 Internal Gage Selection and Setup Chart

The chart below shows each API connector and the corresponding Thread Height Gage, Contact Point, and Setting Standard Model Numbers. Before beginning the setup, locate the type of thread you are measuring and determine the proper contact point and setting standard to use for your application.

Thread Type	Gage Model Number	Contact Point Model Number	Setting Standard Model Number
API 8 & 10 Round	TH-3006	T501	1014
API 8 & 10 Round - Shave	TH-3008	T503	1014S
API 11½ V (Line Pipe)	TH-3004	T500C	1015
API Buttress, ¾" TPF	TH-3009 or TH-3002B*	T072	1017
API Buttress, 1" TPF	TH-3003B*	T072	1018
Drill Pipe, V-0.032, 2 TPF	TH-3000RSC or TH-3009RSC	T034	10322-RS
Drill Pipe, V-0.038, 2 TPF	TH-3000RSC or TH-3009RSC	T072	10382-RS
Drill Pipe, V-0.038, 3 TPF	TH-3000RSC or TH-3009RSC	T072	10383-RS
Drill Pipe, V-0.040, 3 TPF	TH-3000RSC or TH-3009RSC	T034	10403-RS
Drill Pipe, V-0.050, 2 TPF	TH-3000RSC or TH-3009RSC	T044	10502-RS
Drill Pipe, V-0.050, 3 TPF	TH-3000RSC or TH-3009RSC	T044	10503-RS
Drill Pipe, V-0.055, 1.5 TPF	TH-3000RSC or TH-3009RSC	T072	10551.5-RS
Drill Pipe, V-0.076, 1.5 TPF	TH-3000RSC or TH-3009RSC	T044	10761.5-RS
2" TPF H-90 (90-V-0.050)	TH-3000RSC or TH-3009RSC	T072	10H90-2
3" TPF H-90 (90-V-0.050)	TH-3000RSC or TH-3009RSC	T072	10H90-3
1¼" TPF H-90 (90-V-0.084)	TH-3000RSC or TH-3009RSC	T072	SL-H90

* These models are primarily external thread height gages; however, they can also function as internal thread height gages when used on large diameter parts measuring 4 1/2" and greater.

TH-3000 Gage Bore Limitation Chart

The chart below shows each TH-3000 gage and the minimum size requirements for inspection of parts.

Gage Model Number	Minimum Bore Limits	Wall Thickness Limits
TH-3002B, TH3003B*	3.30"	N/A
TH-3004	1.60"	.560"
TH-3006	1.60"	.560"
TH-3008	1.60"	N/A
TH-3009	1.60"	N/A
TH-3010	1.60"	N/A

* These models are primarily external thread height gages; however, they can also function as internal thread height gages when used on large diameter parts measuring 4 1/2" and greater.

Zeroing the Internal Thread Height Gage

Materials Needed:

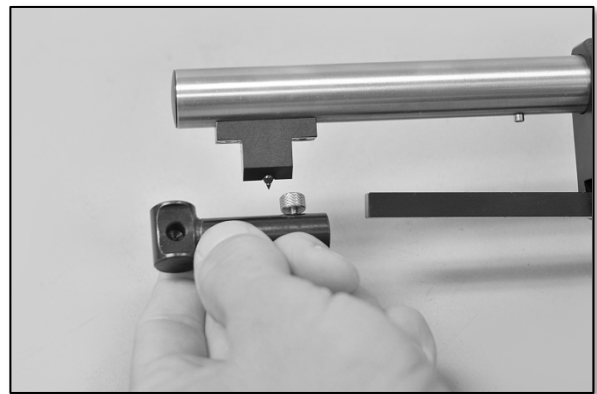
$\frac{3}{4}$ TH-3000 thread height gage

$\frac{3}{4}$ Setting standard

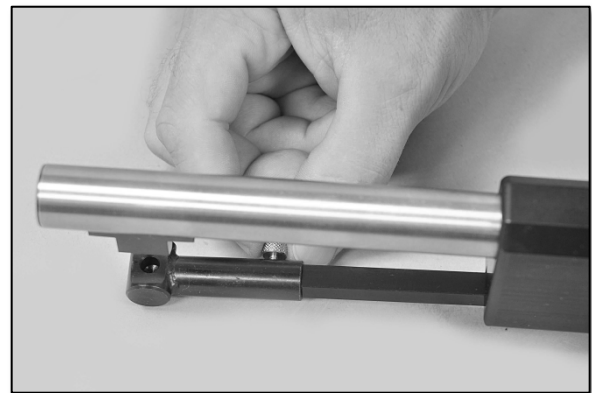
Setting up the TH-3000 gages, involves different steps depending on the model number of the gage. The TH-3004 and 3006 models contain a clamp sleeve, which must be removed before zeroing on a setting standard. Models TH-3008, TH-3009, and TH-3010 do not require removal of any parts before zeroing on a standard.

Note: For models TH-3008, 3009, and 3010, proceed to step 3.

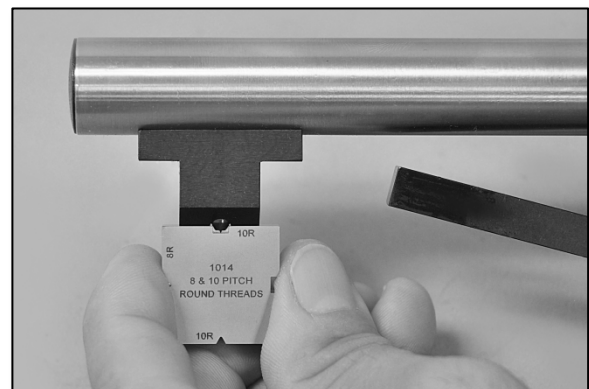
1. Loosen the thumbscrew on the clamp sleeve.



2. Remove the clamp sleeve from the TH-3000 gage.
3. Loosen the indicator clamp.



4. Place the contact point in the square notch of the setting standard.



Zeroing the Internal Thread Height Gage (continued)

5. Turn the indicator dial to align the needle with zero.



6. Place the contact point back into the square notch to verify zero.



7. Place the contact point into the V notch and rock the gage back and forth to re-verify zero.

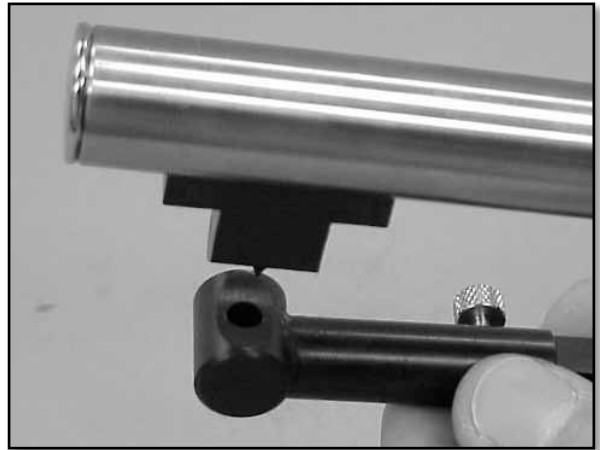


8. Tighten the indicator clamp.



Zeroing the Internal Thread Height Gage (continued)

9. Replace the clamp sleeve.
10. Be sure to properly align the contact point with hole in the clamp sleeve.



11. Tighten the thumbscrew on the clamp sleeve.



Operating Procedures

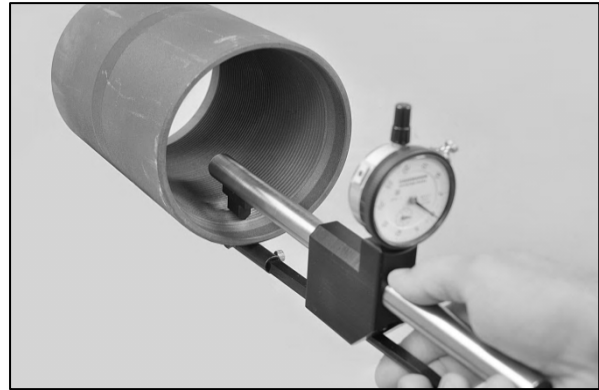
Inspecting Parts

Materials Needed:

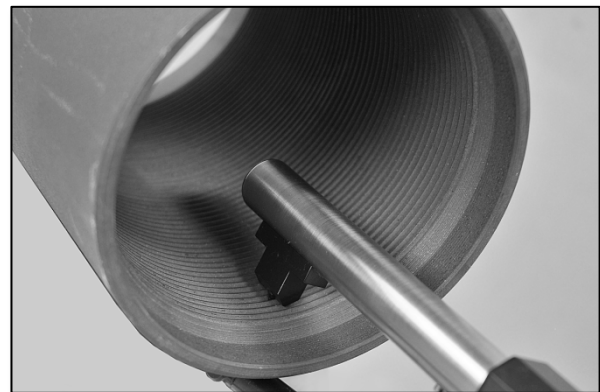
$\frac{3}{4}$ TH-3000 thread height gage
 $\frac{3}{4}$ Part

$\frac{3}{4}$ Inspection report

1. Insert the gage into the part, positioning the contact point in the thread root.

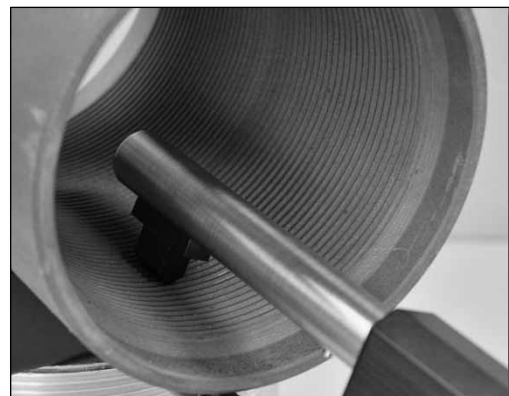


2. Rock the gage back and forth to locate the smallest indicator reading.



3. Take another measurement farther back on the part.
4. Record findings on the inspection report.

Verify repeatability by periodically placing the gage on the standard.



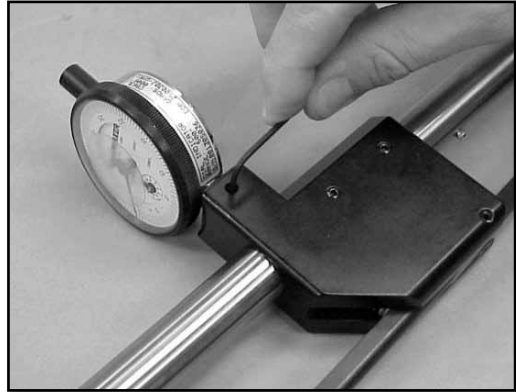
Care and Maintenance

Replacing the Indicator

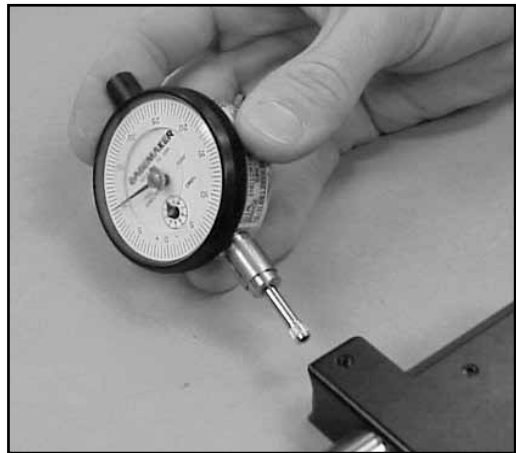
Materials Needed:

- TH-3000 gage
- Indicator
- 5/64" hex wrench

1. Using a 5/64" hex wrench, loosen the cap screw on TH-3000 gage body.



2. Remove the indicator from the gage.

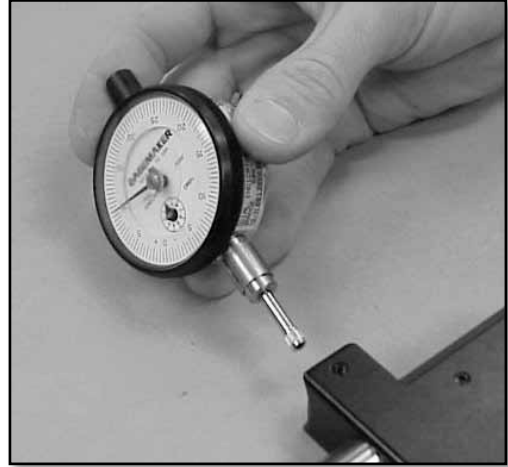


3. Remove the indicator sleeve from the old indicator.
4. Insert the sleeve on the new indicator stem. Be sure to align the split in the sleeve away from the set screw.

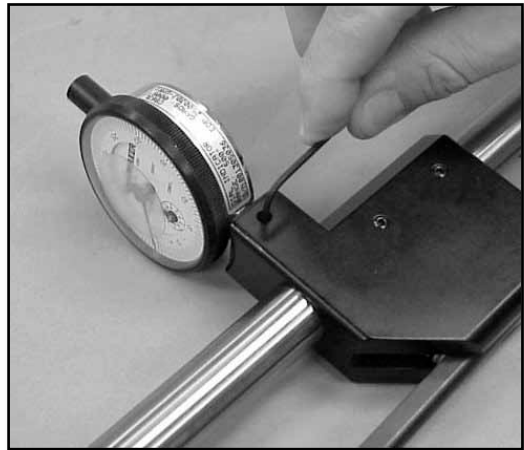


Replacing the Indicator (continued)

5. Insert the new indicator into the gage body.



6. Tighten the cap screw on gage body to secure the indicator.



Maintenance Tips

- $\frac{3}{4}$ Keep all unprotected metal surfaces coated with light oil.
- $\frac{3}{4}$ Avoid dropping the gage or subjecting it to any vibration or impact.
- $\frac{3}{4}$ Keep the gage dry and away from any machine coolant spray.
- $\frac{3}{4}$ Do not force the movement of any of the mechanical parts. The mechanics are designed to move freely.
- $\frac{3}{4}$ Keep the indicator face clean.

Warranty Information

Gagemaker warrants its products to be free from defects in material and workmanship under normal operating conditions for 12 months from the date of shipment. This warranty is limited to repairing, or at Gagemaker's option, replacing any product which is proven to have been defective at the time it was shipped and/or suffered damage during shipping; provided buyer has given Gagemaker written notice of any such claimed defect within 15 days of receipt. Any defective product must be properly packed and shipped to the Gagemaker factory in Pasadena, Texas USA. This warranty applies to all products when used in a normal industrial environment. Any unauthorized tampering, misuse or neglect will make this warranty null and void. Under no circumstances will Gagemaker or any affiliate have any liabilities for loss or for any indirect or consequential damages. The foregoing warranties are in lieu of all other warranties expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Products Requiring Repair or Calibration Return Process

1. Prior to sending any products to Gagemaker, please call 713-472-7360 and request a Returned Material Authorization (RMA) number from Sales.
2. Include a Purchase Order or work instructions with the returned product.
3. Return to: Gagemaker LP
712 East Southmore Ave.
Pasadena, TX 77502-110

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