

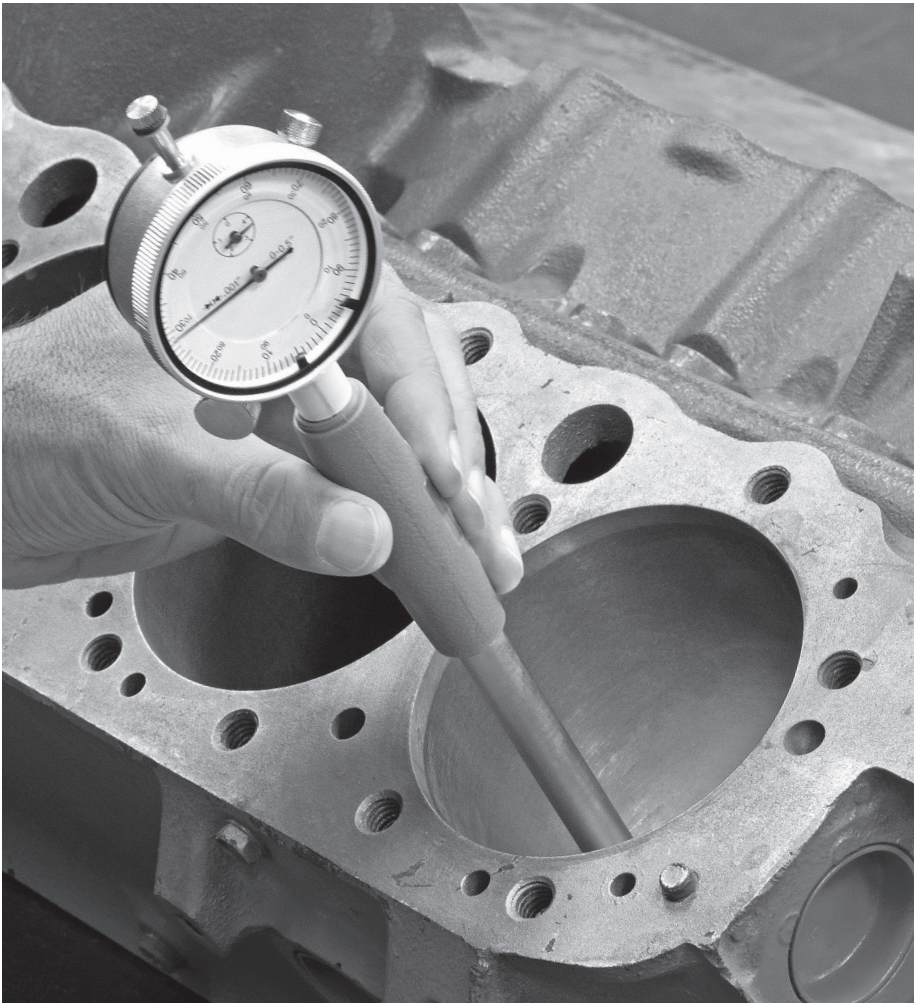


DO THE JOB RIGHT.®

Item #46281

# DIAL-TYPE BORE GAUGE

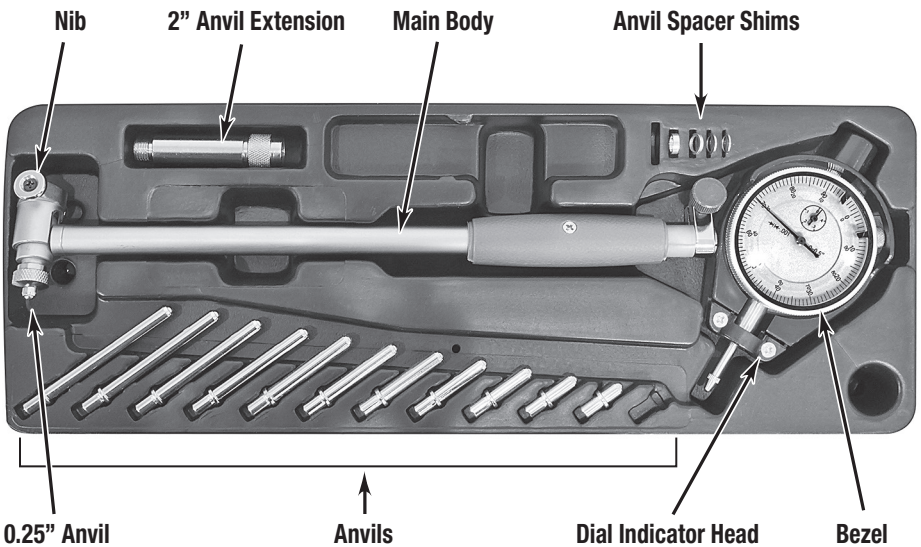
## INSTRUCTIONS



The **DIAL-TYPE BORE GAUGE** is a complete 20-piece set featuring a bore diameter range of 2" to 6" with increments of 0.001", which is ideal for most average automotive engine applications. Precision steel construction provides maximum durability and accuracy. Easily check for cylinder wear including out of tolerance conditions, out of roundness and taper.

## CONTENTS

- (1) 2" - 6" range, 0.001" Dial Indicator Head and Protective Cage
- (1) Main Body
- (1) 2" Anvil Extension
- (12) Anvils, 0.250" through 2.375" length in 0.1875 increments (0.25" factory installed)
- (4) Anvil Spacer Shims; 0.0225", 0.0285", 0.0525" & 0.100"
- (1) Heavy Duty Blow Molded Storage Case



## SPECIFICATIONS

- Hardened, mirror-polished anvil and nib contact faces
- Range from 2" to 6"
- 0.001" increments
- 15/16" throat depth

# SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

## **DANGER**

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

## **WARNING**

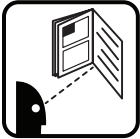
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

## **CAUTION**

CAUTION used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## **NOTICE**

NOTICE is used to address practices not related to personal injury.



### **READ INSTRUCTIONS**

- Thoroughly read and understand these instructions before using this equipment. Failure to follow all warnings can result in tool and or property damage.
- Keep these product instructions for future reference.

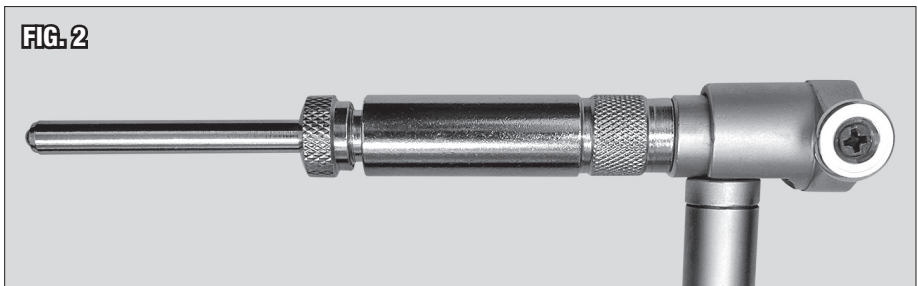
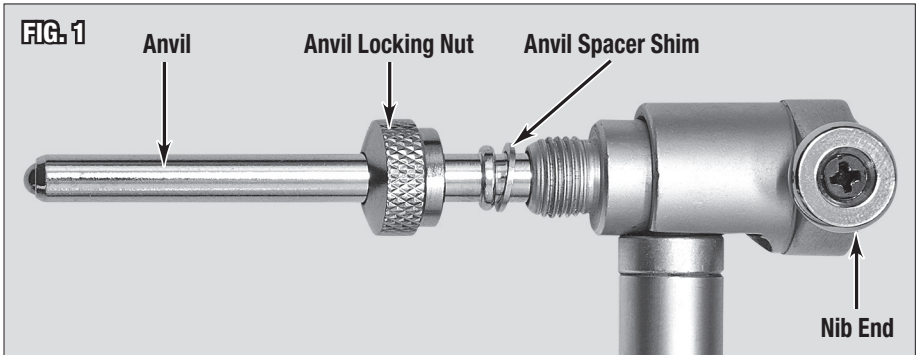


### **NOTICE**

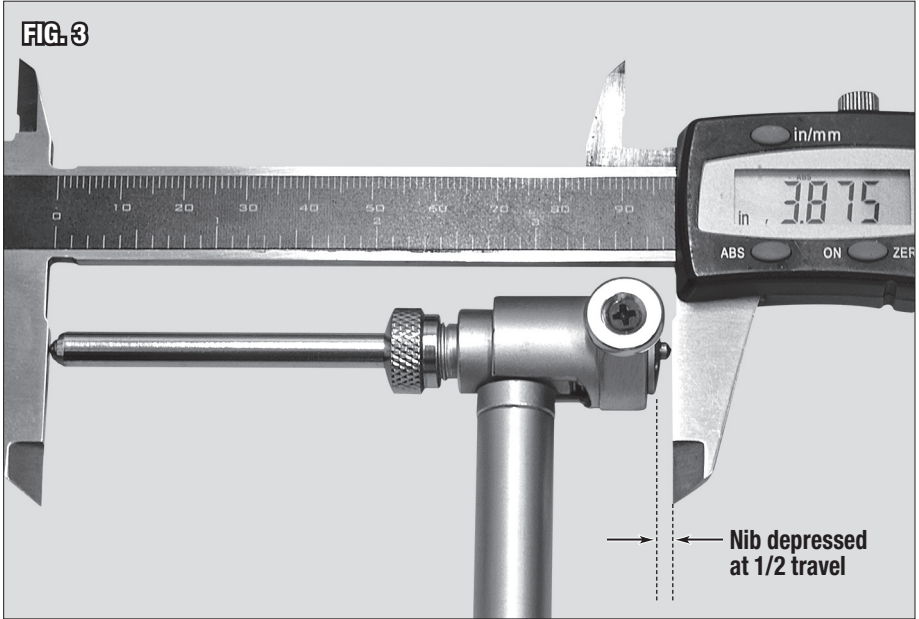
- Always consult with vehicle specific shop manuals for proper measuring procedures, specifications and tolerances.

# SET-UP

- Remove the Dial Indicator Head from its Protective Cage.
- Loosen Clamp on the Main Body and insert the Plunger Stem of the Dial Indicator Head into the Main Body tube.
- Tighten clamp FINGER TIGHT ONLY.
- Construct the Anvil Head to the required bore size by the following method (Note that a bore diameter of 3.875" is being used as an example):
  - Anvil Head without anvils (and Nib pushed in at 1/2 travel) = 1.657".
  - + 2.189" Anvil.
  - + 0.0285" Anvil Spacer Shim.
  - = 3.875".
- Remove the Anvil Locking Nut and 0.250" Anvil.
- Install 2.189" Anvil and 0.028" Anvil Spacer Shim and secure with the Anvil Locking Nut. FINGER TIGHT ONLY (FIGS 1 & 2).



- Set and lock a Micrometer or Calipers to the target dimension (in this example: 3.875").
- Place the Anvil between the Micrometer or Calipers with the Nib depressed at 1/2 its travel then verify the dimension (**FIG 3**). If the dimension is slightly over or under the target, select a thinner or thicker Anvil Spacer Shim and recheck.
- The Gauge is ready for use.



# OPERATION

The accuracy of the Dial Type Bore Gauge measurement can be adversely affected by temperature. Bore Gauge and part temperatures of 72°F [22°C] are ideal while warmer or colder extremes will cause expansion or contraction which can produce inaccurate results.

## ZERO THE GAUGE

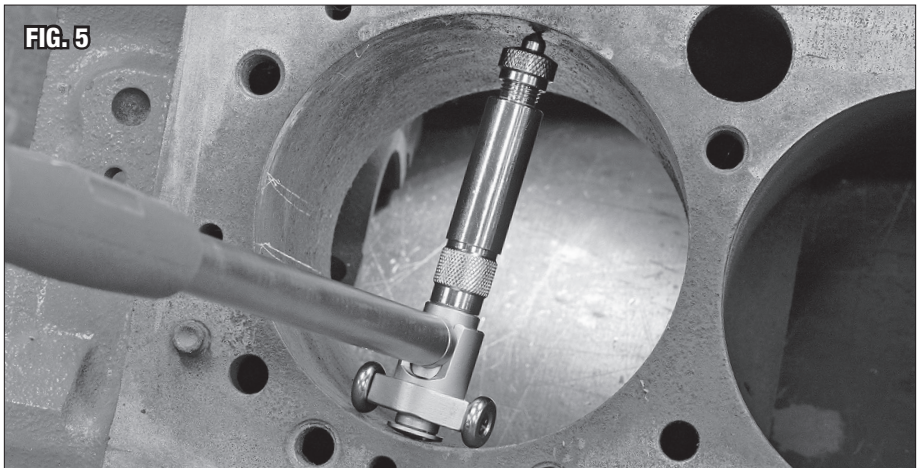
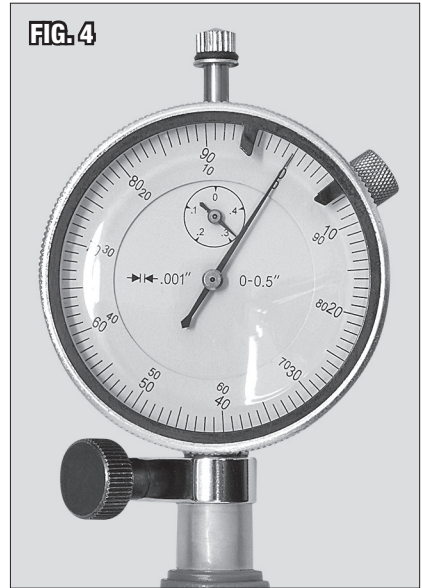
- Based on the target dimension (in this example; 3.875"), loosen the Bezel Lock Screw and rotate the Bezel to allow the Gauge face markings to align with the Needle at Zero (**FIG 4**).
- Tighten the Bezel Lock Screw FINGER TIGHT.

## SET TOLERANCE TABS

- Referring to the particular projects tolerances, set the Tolerance Tabs by sliding them around the edge of the Bezel (in this example; +/- 0.005") (**FIG 4**).

## READING THE BORE GAUGE

- Gently slide the Anvil Head into the bore at an angle with the tip of the Anvil inserted first then follow with the Nib end (**FIG 5**).
- Gently rock the Gauge back and forth in the bore several degrees in each direction to obtain the lowest reading. Do this in several locations up and down and around the bore to establish out of round and taper conditions.
- If the readings are within the Tolerance Tabs, the bore is within specification. If the readings go beyond the Tolerance Tabs, the bore is out of specification.



# MAINTENANCE

- Before each use, inspect the condition of the Bore Gauge for any accumulated dirt, damage or corrosion that may affect operation and accuracy.
- After each use, be sure to inspect and clean any contaminates from the mirror polished surfaces of the Anvils and Nib.

**⚠ NOTICE**

**Dropping the Bore Gauge can have an adverse effect on accuracy.  
DO NOT drop the Bore Gauge or allow it to fall.**

- Keep the Bore Gauge stored in a clean, dry location, in the supplied case. Periodically coat bare metal with a rust preventative coating such as a light machine oil.

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**If you have any questions about the use of this product, please contact**

The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: [techelp@eastwood.com](mailto:techelp@eastwood.com)

PDF version of this manual is available at [eastwood.com](http://eastwood.com)

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