

OPERATING INSTRUCTIONS for SUNNEN® GR-2245 RETRACTABLE DIAL BORE GAGE DIAMETER RANGE: 2 – 6in. (50 - 150mm)

NOTE: Metric dimensions shown in these instructions are conversion equivalents only . . . items are not graduated in metric dimensions unless specifically identified as Metric Models.

HOW TO USE

1. Select correct Gage Point (*see Table 1*).
2. Screw correct range Gage Point (G) into gaging head (*see Figure 1*).
3. Set gage to desired size, using a ring gage, micrometer, or Sunnen CF-1000 Dial Bore Gage Setting Fixture. Set desired size by turning Gage Point in or out.

NOTE: If gage nest on your CF-1000 Setting Fixture has vertical dowel pins, you will have to replace it with a CF-140 Nest Kit (horizontal dowel pins) in order to use the CF-1000 with the GR-2245 Gage.

TABLE 1

USE GAGE POINT NO.	FOR DIAMETER RANGE	
	INCHES	mm
1	2.000 - 2.375	50 - 60
2	2.375 - 2.750	60 - 70
3	2.750 - 3.125	70 - 79
4	3.125 - 3.500	79 - 89
5	3.500 - 3.875	89 - 98
6	3.875 - 4.250	98 - 108
7 + 2	4.250 - 4.625	108 - 117
7 + 3	4.625 - 5.000	117 - 127
7 + 4	5.000 - 5.375	127 - 137
7 + 5	5.375 - 5.750	137 - 146
7 + 6	5.750 - 6.000	146 - 150

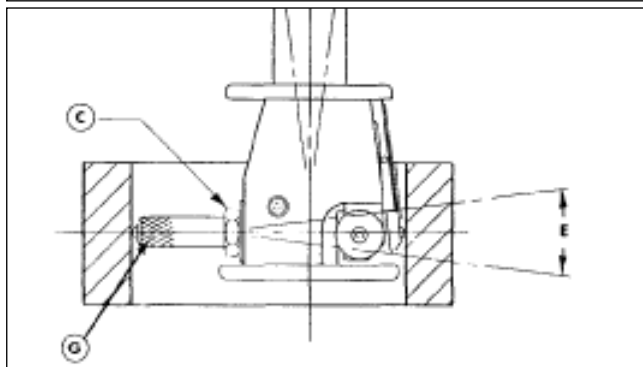


FIGURE 1

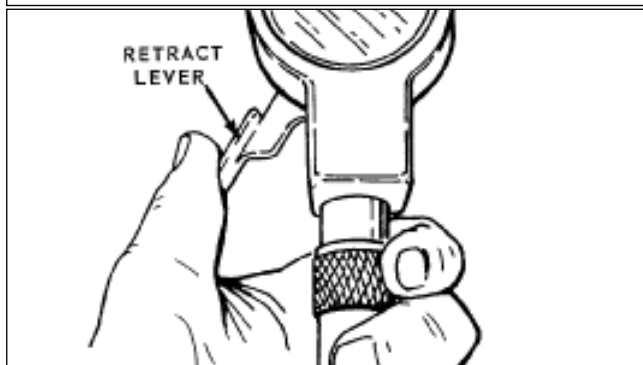


FIGURE 2

4. Lock Gage Point (G) with Locking Nut (C), using wrench furnished.
5. Recheck "0" setting; reset to "0" if necessary by loosening bezel screw, rotating indicator dial face, and tightening bezel screw.
6. Insert gage into bore to be measured and rock as shown at "E" to obtain minimum reading.
7. To retract centralizer points and indicator point squeeze Retract Lever (*see Figure 2*).

HOW TO ADJUST:

Adjust Centralizer Points to Bore Size - If Points don't touch walls of bore, or if they exert too much pressure on walls, adjust as follows:

1. Insert gaging head approximately 3/4in. (20 mm) into bore being measured.
2. Insert 5/64in. Hex Wrench into Centralizer Stop Adjustment. Rotate Wrench to retract or expand Points until they barely contact walls of bore (*see Figure 3*).
3. Slide gaging head in and out of bore several times to check adjustment.

NOTE: The closer Centralizer Points are set to bore size, the easier it will be to insert gage into bore.

Adjust Worn Centralizer Points - When Centralizer Points must be adjusted because of excessive wear, be sure to adjust both Points at same time. Insert 3/32in. Hex Wrench through both

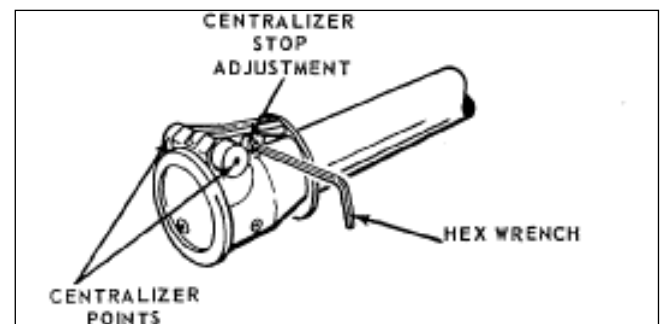


FIGURE 3

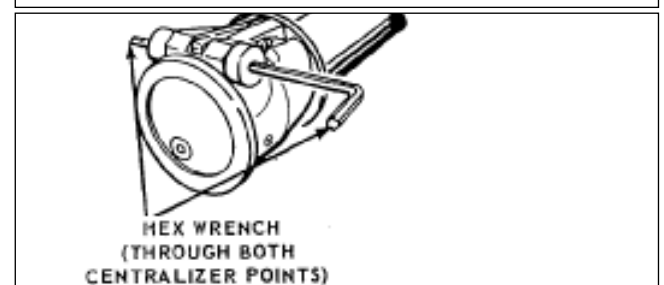


FIGURE 4

Centralizer Points and turn both Points at same time until new wear surfaces will contact walls of bore (see Figure 4).

Adjust Tension on Centralizer Points - For fast, easy gaging with least wear on centralizer points, tension should be adjusted to fit job you're doing: When gaging horizontal bores, tension should be light . . . turn Tension Control until the Line is at bottom of Window (see Figure 5).

When gaging vertical bores, more tension is needed to make centralizer points come out and make proper contact. Turn Tension Control until there is enough tension to keep centralizer points extended. The Line will then be close to top of Window (see Figure 6).

To Rotate Gage Point Ball - When a gage point Ball gets a flat worn on it, Ball can be rotated to a new position, as follows:

NOTE: While performing this operation, hold gage over a clean cloth in case Ball should be dropped.

1. Hold thumb over Ball and pry it out with Gage Point Ball Tool (see Figure 7).
2. Rotate Ball so an unworn area will protrude from gage point. Reinstall Ball by pressing in with blade of Gage Point Ball Tool.
3. Seat Ball by pressing it against hard surface.

To rotate Indicating Finger Ball - When Indicating Finger Ball gets a flat worn on it, Ball can be rotated to a new position, as follows:

NOTE: While performing this operation, hold gage over a clean cloth in case Ball should be dropped.

1. Insert Indicating Finger Ball Tool into Slot and pry upward to remove Ball. Ball will stay in Tool (see Figure 8).
2. Rotate Ball so unworn area will protrude from Indicating Finger.
3. Depress Centralizer Yoke and insert Gage Point Ball Tool to prevent damage to gage when reinstalling Ball (see Figure 9).

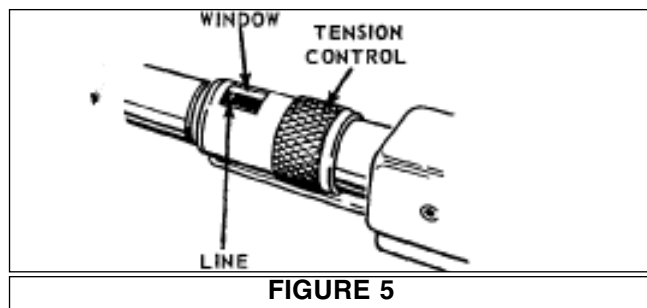


FIGURE 5

4. With Ball still captivated in Indicating Finger Ball Tool, reinsert Tool into Slot, locating Ball over Ball Socket. Press Ball firmly into place and remove Indicating Finger Ball Tool.

5. Make sure Ball is seated by pressing it down firmly with flat back of Indicating Finger Ball Tool.

6. Remove Gage Point Ball Tool.

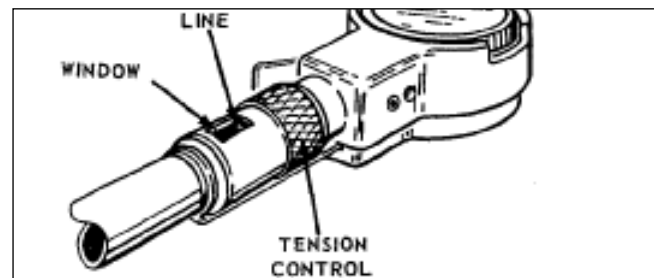


FIGURE 6

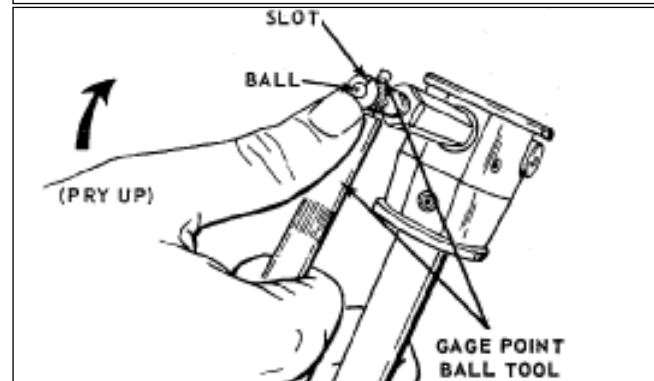


FIGURE 7

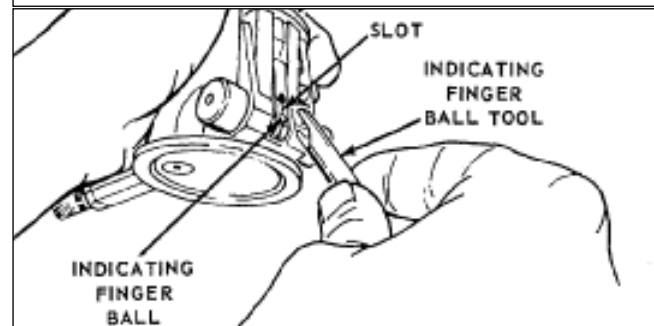


FIGURE 8

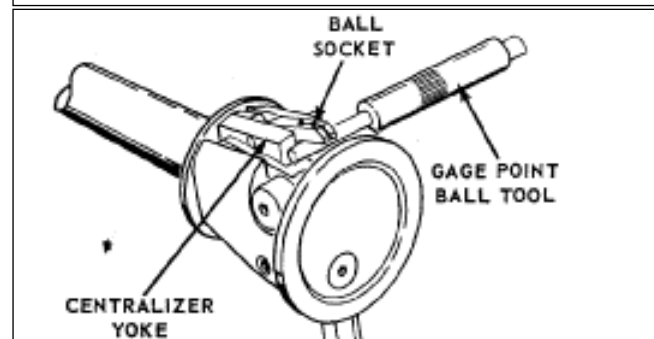


FIGURE 9

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