

THE JOHNSON GAGE COMPANY

534 Cottage Grove Road • Bloomfield, CT 06002

Tel: (860) 242-5541 • Fax: (860) 242-0513

SETTING & OPERATING

INSTRUCTIONS

Johnson Ring Snap
Thread Comparator

Model B

Drawing SA62-D7

Distributed by:

Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

SETTING INSTRUCTIONS FOR:

Johnson Ring Snap Thread Comparator (Model B)

1. Assemble Frame (1) to Mounting Stand (11) as illustrated.
2. Position Pivot Arm (3) approximately parallel to top of Frame (1) with Pivot Arm Restrictor Screw (7a or 7b).
3. Assemble Segments (2) on Studs and lock into position with Segment Retaining Screws (8).
4. Pivot Set Master into Segments (2). When Segments are approximately 180° apart, lower Pivot Arm (3) utilizing Pivot Arm Restrictor Screw (7a or 7b) until Segment contacts GO Set master.
5. Assemble Dial Indicator (5) to Frame (1) and generate approximately 3/4 of a revolution on Indicator.
 - a. Tighten Indicator Locking Screw (4). Not the final adjustment.
6. Pivot GO Set Master through Segments (2) approaching, arriving and passing beyond the high point by two graduations on Dial Indicator.
7. Advance Positional Stop Screw (9) until contact is made with lower Segment. Observe nudge on Dial Indicator when this contact is made. Continue advancing Positional Stop Screw (9) until movement of one graduation is achieved on Dial Indicator. This position will now reflect a position on Dial Indicator Hand that is one graduation less than the high point.
8. Secure Positional Stop Screw Lock.
9. Loosen Indicator Locking Screw (4) and position Indicator to ZERO. (The ZERO position on Dial Indicator should be at 12 o'clock).
10. Raise Pivot Arm Restrictor Screw (7a or 7b) until contact is made on Pivot Arm (3) while GO Set Master is still engaged.
11. Remove Set Master and lower Pivot Arm utilizing Pivot Arm Restricting Screw (7a or 7b) so that a 6 o'clock position is achieved on Dial Indicator.
12. Lock Pivot Arm Restrictor Screw (7a or 7b) by advancing Pivot Arm Restricting Screw Nut to body of Frame.
13. Engage Set Master into Segments (2), rotate Set Master 1/2 revolution to assure "O" reading on Dial Indicator.

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COMPONENTS FOR:

Johnson Ring Snap Thread Comparator (Model B)

- | | | | |
|----|-------------------------|-----|----------------------------|
| 1. | Frame | 7a. | Pivot Arm Restrictor Screw |
| 2. | Functional Segments | 7b. | Pivot Arm Restrictor Screw |
| 3. | Pivot Arm | 8. | Segment Retaining Screws |
| 4. | Indicator Locking Screw | 9. | Positional Stop Screw |
| 5. | Dial Indicator | 10. | Mounting Bolt & Washers |
| 6. | Pivot Arm Tension Screw | 11. | Mounting Stand |

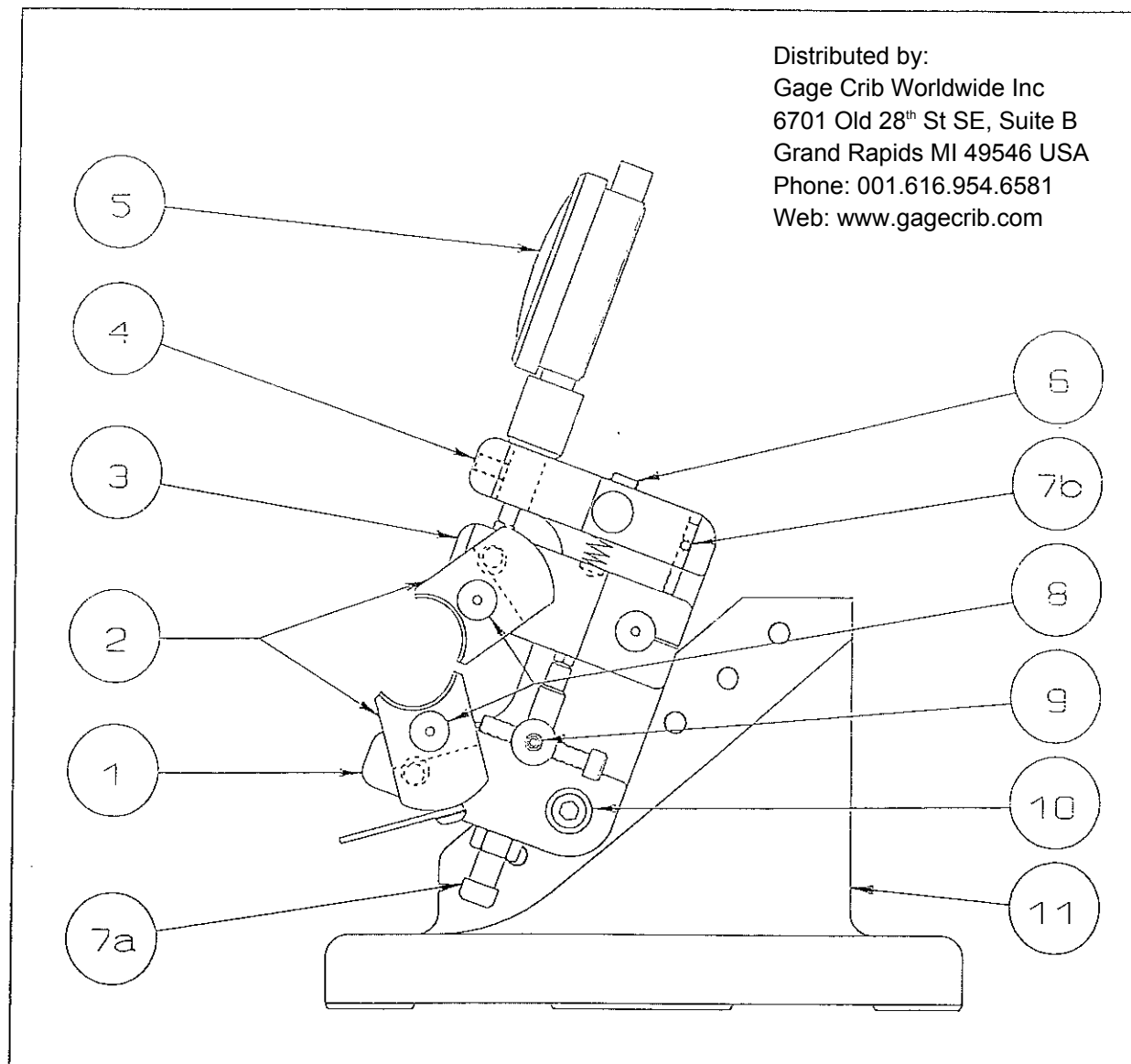


Figure 1-
Johnson Ring-Snap Thread Comparator (Model B)

SETTING INSTRUCTIONS FOR:

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14. Set Dial Indicator tolerance hands where "O" equals MAXIMUM MATERIAL. Set other tolerance hand to MINUS tolerance according to Pitch Diameter Tolerance for product part.

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OPERATING INSTRUCTIONS FOR:

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1. Always load Product Part through the front of the segments. Pivot segments to stop position.
2. Oscillate Product Part approximately 1/2 turn to seat in gaging position.
(DO NOT SCREW PRODUCT PART THROUGH SEGMENTS)
3. Rotate Product Part one turn to check for ovality.
4. Withdraw Product Part through front of Segments. Repeat depending on the length of Product Part.

MAINTENANCE

Johnson Ring Snap Thread Comparator (Model B)

1. Clean Segments occasionally with a brush.
2. A light solvent, applied directly to the segments will keep them clean.
3. Check the setting of the Thread Comparator occasionally with the Master Setting Plug to insure that the setting of the Dial Indicator has not changed.
4. Visually check Segments to be certain that no burrs, nicks, chips, etc., are present in the segments.

DETERMINING WEAR ALLOWANCES

on Segments

Place truncated portion of "GO" Master Setting Plug into Thread Comparator. Set Dial Indicator to ZERO. Remove truncated portion and engage full form portion of GO Master Setting Plug. Observe reading. Note the difference between the two Dial Indicator readings. The difference should not exceed 1/2 of the total cumulative Tolerance as found in appropriate columns Table C.9, Page 6.14 Handbook H-28 (1969) Part 1, Screw Thread Standards for Federal Services.

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HELICAL PATH DEVIATION CHECK

on Johnson Ring Snap Thread Comparator (Model B)

1. Remove upper Segment Retaining Screw (8).
2. Axially move the upper Segment (9) to the Right one pitch in relation to the lower segment (9).
3. Place Part to be checked into Segments (2).
4. Lock lower Segment in actuated (closed) position by means of locking screw provided in lower segment.
 - a. Note: By removing the Upper Segment Retaining Screw and moving the Segment away from the Frame, the Upper Segment is not free to move axially and follow the Helical Path Deviation of the product thread.
5. Bring the test type indicator into contact with outer surface of the upper segment.
6. Rotate part through segments a minimum of one complete revolution.
7. Note total plus and minus axial movement of the upper segment and multiply by 1.7.
 - a. This is the diameter equivalent for helical path deviation.

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