



**Bearing Staking,
Removal, and Testing**

Portable Swaging Tool Operating Instructions

1) Disassemble tool by carefully unscrewing draw rod hex nut ⁽⁸⁾ in locating fixture ⁽⁷⁾.

2) Insert roller fixture assembly into bearing with connecting sleeve ⁽⁵⁾ through the bore of the bearing ⁽¹³⁾ and so that the rollers ⁽⁹⁾ seat against the lip of the bearing groove.

3) Mount locating fixture assembly on opposite side of bearing. Line up and insert draw rod ⁽⁸⁾ into connecting sleeve ⁽⁵⁾ threading the bolt into the sleeve by turning hex nut (on locating fixture side) of draw rod ⁽⁸⁾ clockwise. Tighten until rollers are snug against groove lip and locating fixture insert ⁽⁶⁾ is flush with the face of the bearing outer race and housing

Note: Never over tighten causing rollers to dent or make an impression in groove lip Insure that the flat face of the locating fixture insert ⁽⁶⁾ is the side supporting the bearing and housing.

4) Rotate roller fixture by hand to ensure there are no restrictions.

5) Turn hex nut (on locating fixture side) of draw rod ⁽⁸⁾ clockwise approximately 30 degrees causing roller to press against lip.

6) Rotate roller fixture three complete revolutions or until it rotates without resistance

7) Repeat steps 5 & 6 above until the draw rod nut ⁽⁸⁾ is rotated 180 degrees or until the bearing lip is completely swaged and there is no gap between the lip and housing or it meets specification.

8) Remove the locating fixture from the roller fixture by unscrewing the draw rod hex nut ⁽⁸⁾ in the locating fixture.

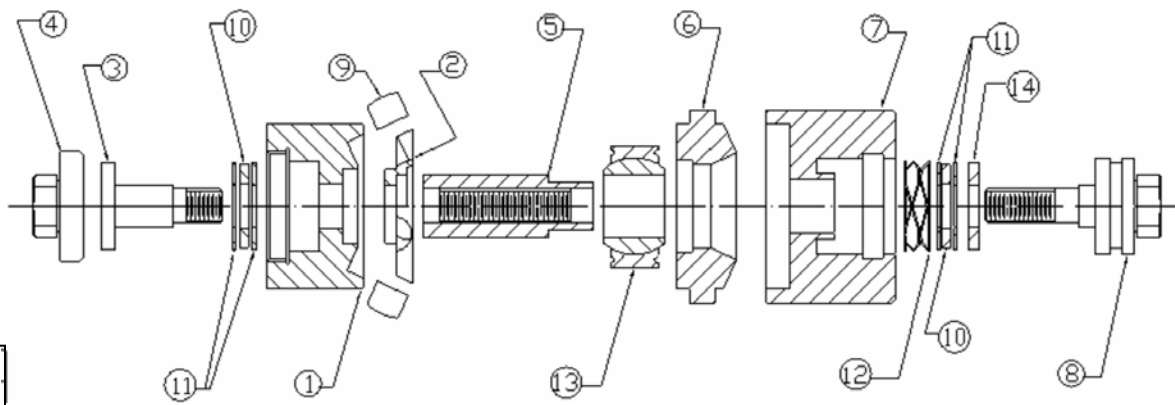
9) For double v-groove bearings, flip the tool around so that rollers are on other side of the bearing in order to swage opposite side. Flip the locating fixture insert ⁽⁶⁾ so that the angle face is now supporting the lip of the bearing that has been swaged.

10) Repeat steps 1 through 8 to swage the opposite side of the bearing.

• request a quote

NPB Bearings:

- miniature & instrument ball bearings
- aerospace bearings
- spherical plain
- nu & nx bearings
- thin section bearings
- bearing tools
- line card



Portable
Tool

Portable Tool Parts List

ITEM NO.	QTY REQ'D	DESCRIPTION	STANDARD
1	1	ROLLER FIXTURE	
2	1	RETAINER	
3	1	DRAW SCREW	
4	1	ROLLER FIXTURE CAP	
5	1	CONNECTING SLEEVE	
6	1	LOCATING FIXTURE INSERT	
7	1	LOCATING FIXTURE	
8	1	DRAW ROD	
9	3	ROLLER	
10	2	NEEDLE BEARING	BDI OR TIMKEN TORRINGTON NTA613
11	4	NEEDLE BEARING RACE	BDI OR TIMKEN TORRINGTON TRA613
12	1	WAVE SPRING	SMALLEY CREST TO CREST CS087HJ
13	1	BEARING	MS14101-9
14	1	SPACER	0.80" OD X 0.375" ID X 0.095" WASHER

Roller fixture assembly: 1,2,3,4,5,9,10,11

Locating fixture assembly: 7,8,10,11,12,14

Bearing to be swaged: 13

Bearing Tools Contact: [Bruce Dumas](#)

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