



Belvac Production Machinery Technical Bulletin

Information for Customers Operating & Maintaining Belvac Machines

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New Clamp-Style Bearing (for 595K and Non-K Main Shafts)

Belvac has traditionally used a commercially available dual setscrew locking expansion bearing on all 595K and Non-K main turrets. Albeit this style of bearing is widespread in the industry, it has proved problematic over the years on our equipment due to the setscrews coming loose for a variety of reasons. When the setscrews are loose, the shaft becomes severely damaged, creating considerable unplanned downtime for replacement.

Belvac looked into commercially available bearing alternatives to the setscrew locking design. However, these were deemed unsuitable due to space constraints and maintenance inaccessibility.

Finding none suitable for our design needs, Belvac designed, field tested, and patented a Clamp Style Bearing Locking Mechanism (U.S. Pt. 6,905,249) offering superior positive locking within the original size envelope. As indicated in the photos, the inner race has been split, allowing a precision-bored locking collar to form-fit around both the race OD on one side and the shaft OD on the other. When clamped together, the inner race of the bearing is securely attached to the main shaft.

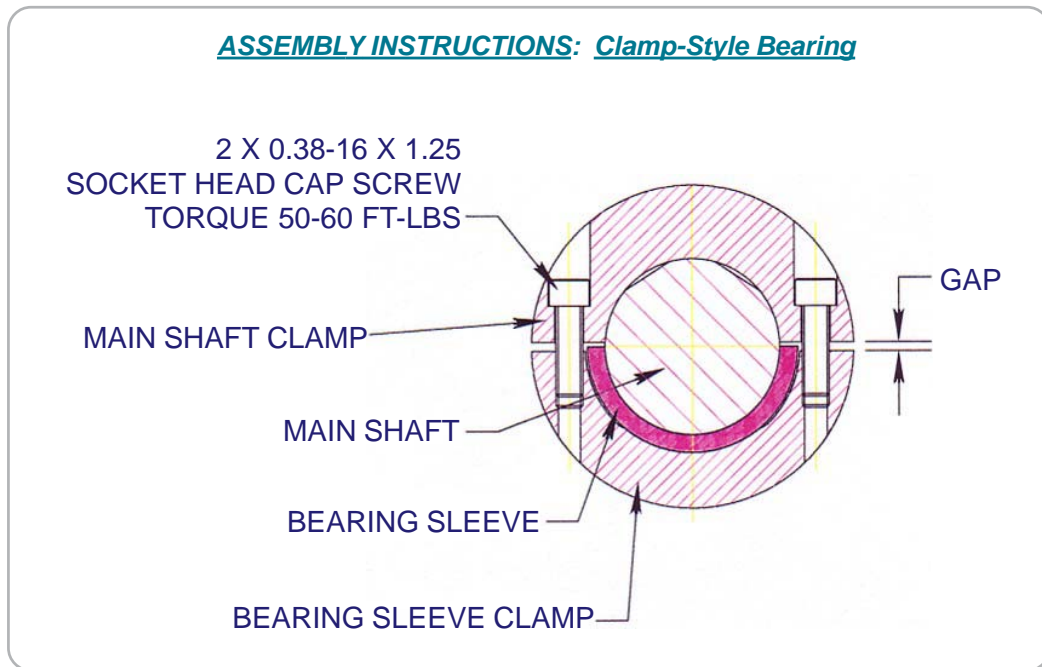


Other important features of this design include:

- ◆ An increased expansion capability up to 0.34" (8.6 mm), allowing swing line 206/202 adjustments without re-centering the bearing on the shaft.
- ◆ No special tools necessary to secure the bearing to the shaft: an ordinary torque wrench is utilized to tighten the SHCS (socket head cap screws) 50-60 ft-lbs (68-82 Nm).

Other important features of this design: (continued from page 1)

- ◆ The assembly cannot be over-tightened causing damage to the bearing or its normal rated function.
- ◆ In the case of an expansion bearing application (as on our turrets) maintainers easily make adjustments.
- ◆ No requirement for flats or other special surface preparation as commonly required in setscrew applications.
- ◆ The new bearing #2753022 is directly interchangeable with Belvac's standard bearing #C20114.



This design will be standard on all 595K and 595 Non-K machinery shipping in and after June 2006. Replacement bearings may be ordered as follows:

NEW CLAMP LOCK BEARING	<i>Original Bearing Reference</i>	APPLICATION SOURCE
2753022	C20114	Main Shaft Turrets -- Drive End

Contact Belvac Sales for a quotation.

All Belvac Technical Bulletins may be viewed on our web site, www.belvac.com.