Belvac Production Machinery
# Technical Bulletin
*Information for Customers Operating & Maintaining Belvac Machines*

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## *595SK Model Necker Systems*
## Design Enhancements

Belvac's 595SK machinery was first introduced to the industry in early 1998 with a speed rating of 3000 CPM. Since that time, many customer locations have been actively running at speeds in excess of 2700 CPM.

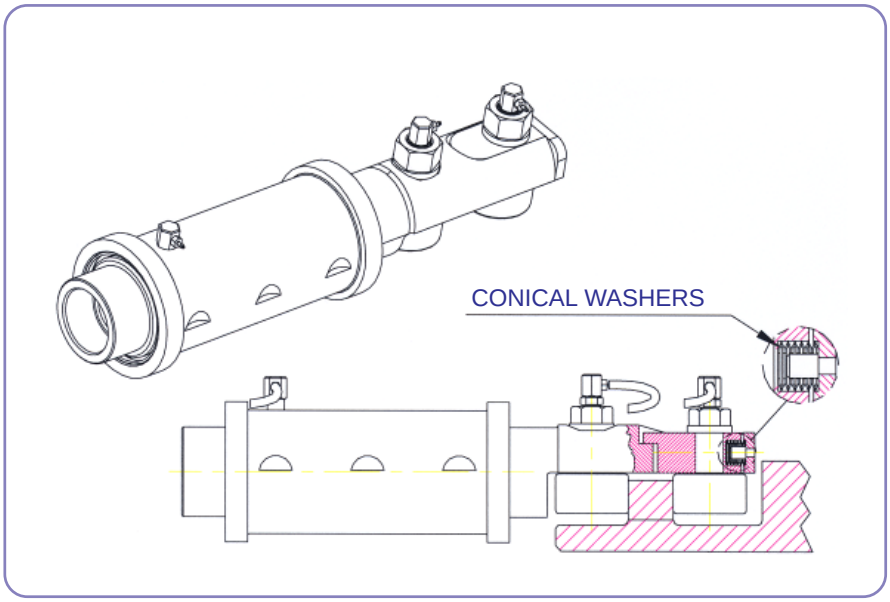
Belvac consistently aspires to increase quality, maintainability and longevity of its equipment with customer input and field testing where appropriate.

Through combined efforts with our customer base, we have had the opportunity to evaluate and redesign various features to enhance reliability resulting in customer satisfaction and confidence.

A new ram assembly design, with planned intention to further extend cam follower life, has run in a can plant on a 595SK Necker System for three (3) years. The original cam followers supplied three (3) years ago on twelve (12) push and twelve (12) knockout ram assemblies are still in use at speeds consistently over 2400 CPM.

The distinctive ram assemblies retain a spring loaded rear follower, with the outer follower guided in a parallel path rather than actuating. As the cam followers and cam generally wear over time, the new design ensures optimum contact of the crowned cam follower, minimizing wear across the crowned cam follower face and cam.

Refer to the following illustration:

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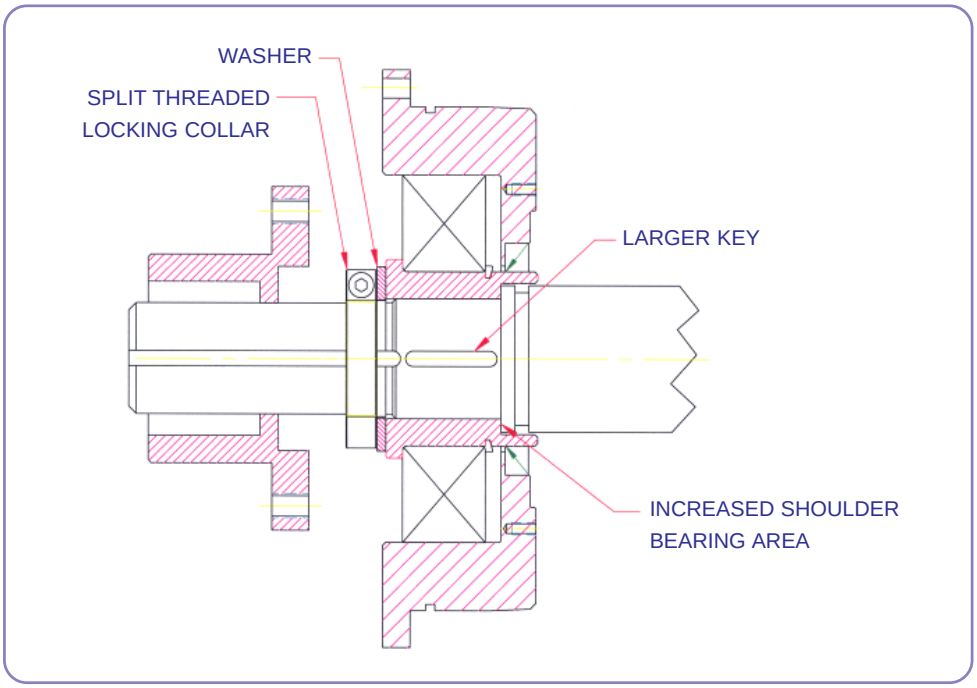
Conical washers maintain preload to the cam, and a tongue-in-groove design provides parallel motion and "squareness" of the roller to the cam face. Additionally, the conical washers bottom out in the event of a severe tooling jam, reducing the chance of damage to the ram assembly.

The new push and knockout 595SK ram assemblies are directly interchangeable with 595SK leaf-spring pivoting ram assemblies.

A second enhancement concerns the bearing locking mechanism on the drive end of the machine. Customer concern over the original shaft lock nut and washer arrangement coming loose over improper installation or orientation of the washer, led Belvac to redesign this area using a commercially proven split threaded locking collar. Unlike a conventional shaft lock nut, the split locking collar ensures the integrity of the assembly by wedging the threads of the collar to those on the shaft, and securing with the locking cap screw.

Since the shaft required redesign in this regard, the shoulder loading area for the inner bearing race and the anti-rotation key were increased, affording an enhanced integral subassembly. See the following illustration:




NEW 595SK BEARING LOCKING MECHANISM

The revised bearing locking mechanism is not readily interchangeable with existing turrets unless the main shaft and other components are provided.

The New Conical Washer Style 595SK Ram Assemblies and Bearing Locking Mechanism enhancements will be standard on all 595SK machines shipping after November 1, 2004.

*Please direct inquiries to Belvac Sales and Service Staff.*

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