



Belvac Production Machinery Technical Bulletin

Information for Customers Operating & Maintaining Belvac Machines

ISSUE 01 VOL. 4 October 2001

595K LIGHT TESTER ENHANCEMENT

During the necking operation, damaged cans are automatically dropped at the vacuum transfer starwheels, creating empty pockets. These empty pockets, upon reaching the Light Tester turret, cause the detector head to be flooded with light. The effect is a temporary blinding or saturation of the detector head. Because the detector head is saturated, a number of cans following each empty pocket (*typically between 1 and 4 cans*) are seen by the detector head mistakenly as gross leakers and blown off.

Belvac has technologically advanced the 595K Light Tester by creating a Precision, High-Speed, Camera-style Shutter Assembly. Together with enhanced Upper Light and Acrylic Starwheel assemblies, the Enhancement Kit will offer the following:

- Eliminates detector head light saturation during an empty pocket
- Increases overall operational productivity and effectiveness
- Increases ease of maintenance with a lighter-weight, compact shutter assembly design
- Increases effectual light reaching the cans

Servo Shutter Assembly

The Belvac Servo Shutter (Figure 1) was designed to eliminate empty pocket saturation. It operates like a conventional camera shutter, only open during normal operation, and closed for the empty pocket. The electromechanical assembly consists of a 40mm shutter, a servomotor, and aluminum housings.

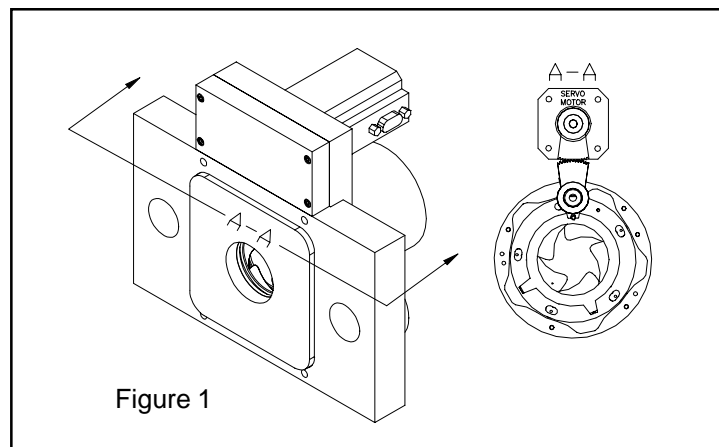


Figure 1

Upper Light Enhancement

Knowing that pinholes vary light to the detector head according to their position, especially at the 3 and 9 o'clock positions, Belvac redesigned the Upper Light Assembly (see Figure 2, on back) to focus and enhance light at these critical angles creating a uniform light pattern around the can. The assembly consists of a 3X4 array of halogen lamps strategically positioned to focus light from the flange of the can to the push pads. Testing revealed a 7-10% increase (improvement) in readings.

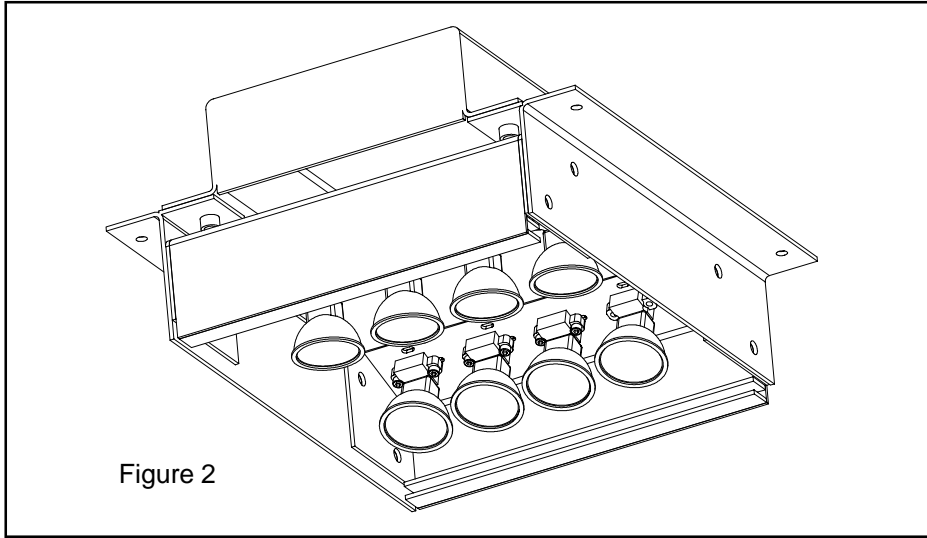


Figure 2

Starwheel Enhancement

Light emitted from pinholes in cans below the 3 and 9 o'clock positions may be filtered by contaminants on the starwheel. Belvac has modified the existing starwheels (Figure 3A) by reducing the thickness from 18mm to 8mm, as well as adding scallops (Figure 3B) to the can contact area. These modifications reduce the amount of contaminants on the starwheel, and allow more light to pass to the detector head. Testing showed a 7-10% increase in readings.

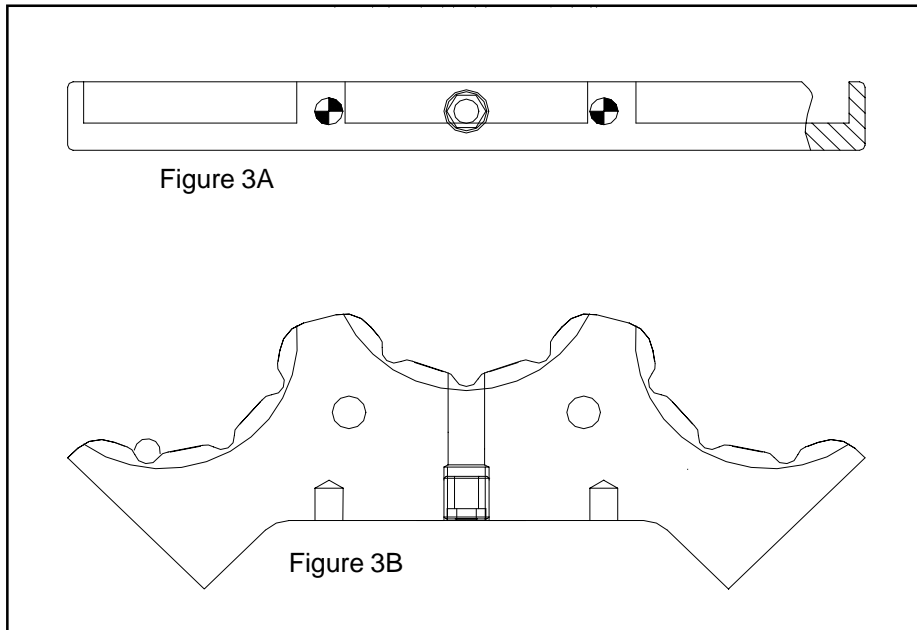


Figure 3A

Figure 3B

Contact Belvac Sales for conversion kit availability and pricing. *Each kit is tailored to the specific serial number of light tester turret: please have your serial number ready for efficient processing.*

These design enhancements will be standard on all new light tester shipments effective June 2001.