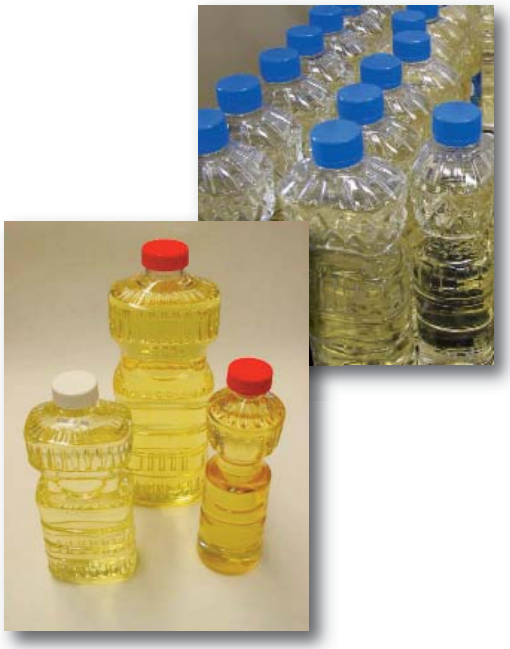
TAPTONE
APPLICATION NOTE
Volume 2, No. 6

LEAK DETECTION ON PLASTIC EDIBLE OIL BOTTLES

Tested: Edible Oil in Clear Plastic Bottles

Tested with: TapTone 1000-C Compression System

Processors who supply vegetable and other consumable oils to retailers are keenly aware that one leaking container can cause the rejection and return of an entire pallet. These returned goods are costly to the processor in terms of waste and retailer fines. The T1000-C Compression Sensor is ideal for finding leaking containers before they leave the processing plant.

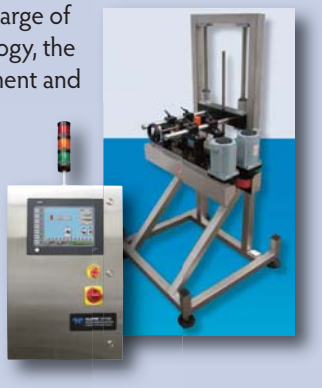


Edible Oil in Plastic Containers

TECHNOLOGY CORNER
How it Works

TapTone 1000-C Compression System

The TapTone 1000-C detects leaks in plastic containers. As a container passes through the system, dual parallel belts apply force to the sidewalls of the container. This action compresses the head space of the container, which allows a load cell to take a force measurement at the discharge of the system. Utilizing DSP technology, the controller analyzes the measurement and assigns a merit value to each container. If the merit value is outside of the acceptable range, a reject signal activates a remote reject system.



See next page for test results

TELEDYNE TAPTONE
Package Inspection Systems
A Teledyne Technologies Company

www.TapTone.com

TAPTONE

APPLICATION NOTE

Volume 2, No. 6

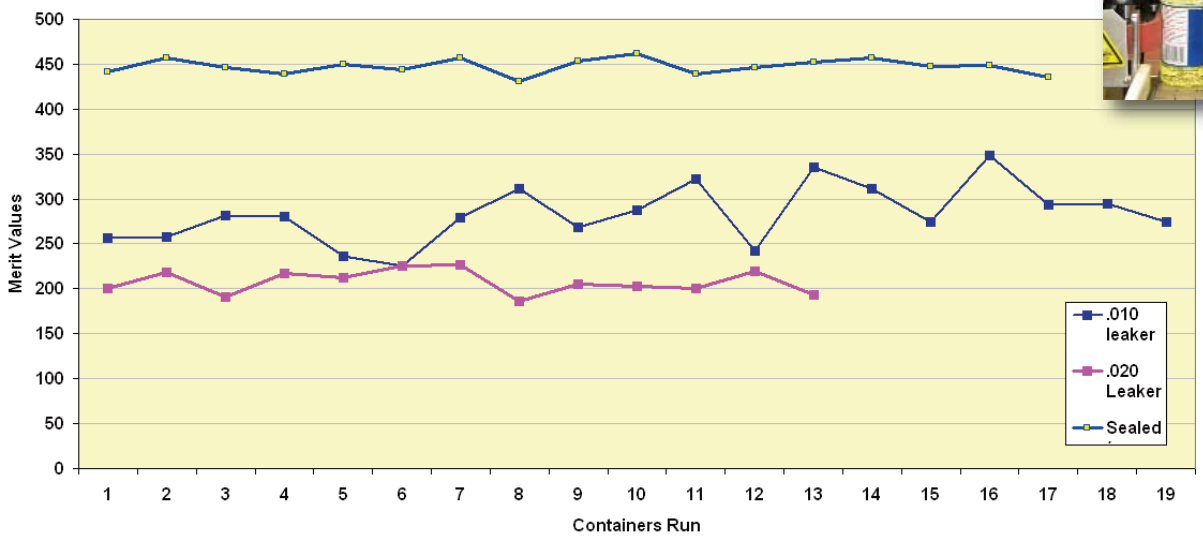
TEST

The test on plastic edible oil bottles was performed as follows:

- Setup the compression belts to the flat area of the bottle with a slight compression in this area.
- Created leaking containers and recorded data. For this test, leaking containers were created by inserting calibrated leaks in the cap of .010" and .020" (.254mm and .508mm) in diameter.

RESULTS

The graph shows the merit values for the test. The properly sealed containers, when compressed, averaged a merit value consistently around 450. When calibrated leaks were introduced into the cap, the resultant merit value of the container was no higher than 350 for a .010" (.254mm) leak and 240 for a .020" (.508mm) leak.



*Merit value is a calculated number determined using an algorithm to compute a resultant from a set of data values.

SUMMARY

The T1000-C Compression Sensor is capable of detecting leaks as small as .010" - .020" (.254mm - .508mm) at full production line speeds.

TELEDYNE TAPTONE
Package Inspection Systems
A Teledyne Technologies Company

www.TapTone.com

49 Edgerton Drive • North Falmouth, MA 02556 USA

P: 508.563.1000
F: 508.564.9945
E-Mail: taptone@teledyne.com

ISO 9001 Certified CE Compliant