

## Finding no vacuum cans inside sealed cases

**Tested:** Cases of canned soup, 3-piece cans, 4X3 case, 1 Lb. 7 oz. cans

**Tested with:** TapTone Case Tracker proximity system

The purpose of this test was to verify the seal integrity of cans in a shrink-wrapped case. The objective was to locate individual cans with no vacuum present.

### Case Tracker -- How it works

The Case Tracker is a non-contact inspection system designed for checking pressure or vacuum loss in individual containers inside cases and film over-wrapped trays. The system also inspects the case for missing or damaged containers. The system uses multiple proximity sensor inspection heads to measure the lid curvature of each container. This data corresponds directly with a loss of vacuum or pressure. A digital signal processing technique compares the measured lid curvature with a reference signature of a good container to determine seal integrity.

If a bad or missing container is detected, the individual container will then be marked on the case with an optional spray marker, the entire case is then diverted from the production line using an optional case rejector. For warehouse applications the system is equipped with a 2-meter conveyor. Standard conveyor configurations allow for inspection at 80 or 120 cases per minute depending on case length.



▲ Cases of canned soup

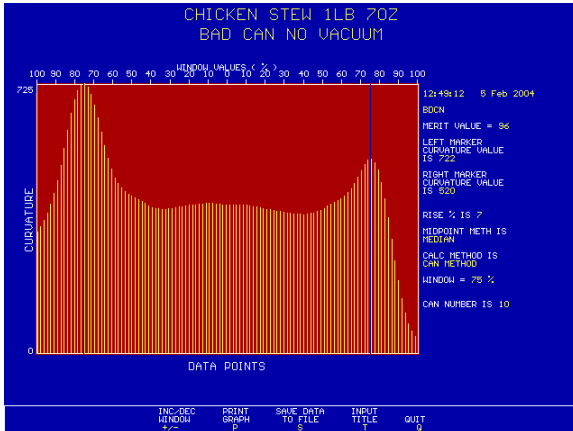


▲ Case Tracker

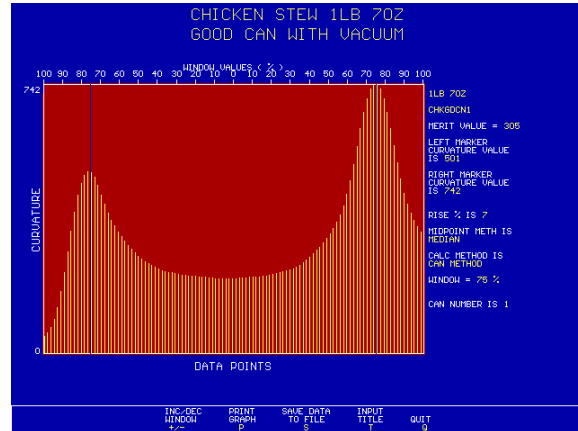
*See next page for test results.*

### Test Summary

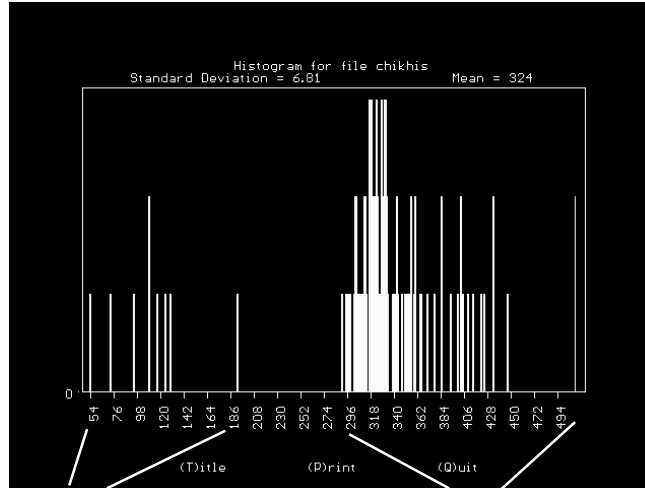
Testing was successful with a clear distinction between no vacuum containers and those with proper vacuum. No vacuum containers had a merit value ranging from 54 - 187. Good containers had a merit value between 280 - 511.



▲ Profile of a no vacuum container



▲ Profile of proper vacuum container



Cans with zero vacuum had merit values ranging 54 – 187.

Good cans had merit value ranging from 280 – 511. The separation between good and bad cans is a minimum of almost 100 values.

### NOTE:

Merit value is a calculated number generated from the processing of an algorithm to compute a resultant from a set of data values.