

# Product Reliability Analysis

**Building brand reputation through testing and diligence.**



## **Is your product truly ready to launch?**

Everyone wants a successful product launch, but before you go to market, you should make sure your product is truly ready. Have all the right metrics been checked? How long will your product last? What components are most likely to break? Launching without knowing these answers represents an unacceptable risk to finances and brand reputation.

## **Why conduct product reliability assessments?**

Warranty spend and customer credibility are two major reasons to know your products' reliability.

## **Ask yourself these questions before production launch:**

- What percent of our products might break during the warranty period?
- Will our product meet the life expectations of our customers and our company?

- What is the weakest part of our product?
- Can we trust the life claims our suppliers make for their parts?

## **Why UL?**

A popular, international, fast-food chain was using hamburger frying equipment with a mechanical lid stop that was repeatedly breaking. This was an annoyance to the restaurant management and a hazard for the operator.

Desperate to find a solution, the supplier of this equipment approached UL for assistance. After a detailed review and inspection of failed parts, we developed a test plan to recreate the failure. A fixture was built and parts were tested.

To the shock of the supplier, within two weeks, parts exhibited the same failure mode that was observed in the restaurant. We completed Weibull plots to show the expected life of the component based on testing.

It was great actionable data, but the project didn't end there. Our Advisory Engineering team offered two low-cost ideas on how to quickly improve the design. After prototypes of a new design were created, we tested this new batch on the same test fixture.

The new parts had six times more life than before. Our customer's issue was resolved and their fast food customer was happy.

## **How we can help**

We have experienced reliability engineers who can help you determine when to do HALT, ALT, Life, or other types of reliability testing, and we can conduct the testing in our accredited laboratories. We can help you collect the data you need before production to answer the questions that are so critical to confirm before launch.

**For more information, please email us at [ul.productengineering@ul.com](mailto:ul.productengineering@ul.com) or call us at 641.787.8700**



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