

Transmission Case Leak Test

A North American power train manufacturer was recently challenged with production leak testing 3 models of cast aluminum transmission housings. Model types are randomly presented to the fully automatic leak test systems. Leak tolerances for these particular parts are among the tightest in the industry.

The solution, provided by Assembly & Test Worldwide's 90,000 sq ft. Saginaw Michigan division, was based on palletized, non-synchronous, dual station, leak test systems. These systems, which provided incremental capacity expansions matching increases in production requirements are in production at several locations in the US and Mexico.



System Overview

- Each self-contained module is capable of testing a part every 105 seconds.
- Auto model identification.
- Hydraulic part clamping.
- Module footprint is approximately 480 sq ft.
- Includes (2) 90° part reorientation mechanisms.
- 25 linear ft of powered conveyor.
- Data collection and interface with host computer system.
- Part volume reducers.
- Part marking system.
- Auto reject area

System Values & Benefits

- Low cycle time to reduce the number of leak test systems required, minimizing cost and floor space requirements.
- Tight leak tolerance capabilities to meet product specifications.
- Robust design and manufacture resulting in high machine availability.
- Quick change seal design minimizes maintenance downtime.

System Highlights

Applied technologies and system features include:

- Micro Flow leak test technology with Accelerated
- Laminar Flow to minimize test times.
- Batch-of-one flexibility.
- Automatic part reorientation to minimize system footprint.
- Non-sync. palletized conveyance for optimum throughput.
- Quick-change seal replacement system.
- Includes Accept, Reject, and Zero leak masters.