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CLIENT CASE STUDY

CUSTOMER

Customer is a regional supplier of high-end critical tolerance injection molds to a variety of industries but specializing in automotive, specifically for Honda Manufacturing of America.

CHALLENGE

The brake reservoirs in this project needed to be assembled, tested, and marked with the majority of the process originally being done manually, leading to significant amounts of scrap and inconsistent quality. Further, the company was faced with increased production demands from their customer and semi-automated assembly was no longer an option.

SOLUTION

Due to the company's lack of resources to design, integrate and program a fully automated system, they turned to Acutek Automation to design a custom, oval conveyor system encompassing eleven assembly and testing stations. Among the integrated features were an HMI touchscreen for operator control and system information, a PLC-based program for system control and part tracking, and the following:

- The two halves of the brake reservoir are "welded" together using an IR lamp
- The completed assembly is leak tested using compressed air
- A "bad part" offload station for units that fail the leak test
- A screw-on cap is added to the unit
- A vision inspection system checks for the correct placement of the cap and orientation of a yellow arrow on the cap
- The part is marked with a manufactured date using a dot-peen engraving system

RESULTS

Production output increased more than 150% to approximately 2500 units per shift, up from 1000 per shift. The customer was able to surpass the production quotas required while at the same time reducing rework and substandard units to less than one percent.