

Application: Automatic transmission components		Date: Nov. 14, 2023
Serial number: (1099-0524)	Machine model: Aquamaster CB-2820F	
Machine type: ConveyORIZED Belt	Industry: Remanufacturing	

Customer summary: A leading transmission remanufacturer delivers OE+ quality rebuilt transmissions with nationwide reach, emphasizing reliability, innovation, and strong customer partnerships. To maintain consistent quality and efficiency, they required a solution to remove oil, grease, and debris from complex transmission components prior to reassembly.	
Item to clean: Automatic transmission components for GM 6L80 and 6L90 rear wheel drive transmissions.	
Contamination: Transmission fluid, oils, grease and road soils.	
Cleanliness requirement: Visually clean	
Dryness requirement: 100% dry is desired. Some residual moisture may remain in blind holes (housing components) or cupped areas of parts depending upon how they are racked.	
Production rate:	Parts are processed in stainless steel carriers measuring approximately 21" wide x 28" long at a rate of 15 to 20 carriers every 5 minutes. Conveyor speed is anticipated to be 10 ft/min. assuming 20 carriers/5 minutes or 4 carriers/minute.

Process parameters:	Dual Wash, rust inhibit and heated blowoff
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Customer background:

The customer is a remanufacturer of automotive transmissions, specializing in restoring used units back to original performance standards. Their process involves disassembly, inspection, cleaning, machining, and reassembly of complex transmission systems for distribution to automotive repair shops and OEMs.

Challenge:

The customer needed a reliable way to remove oil, grease, and machining debris from transmission housings and components. Manual cleaning methods were proving inconsistent, labor-intensive, and unable to keep up with production demand. In addition, the complex geometry of transmission housings made it difficult to remove contaminants from blind holes, passages, and intricate surfaces. The customer required a cleaning system that would provide consistent results, improve operator safety, and streamline throughput.

Solution:

Alliance provided a conveyORIZED parts washer designed specifically for large, complex components like transmissions. The system incorporated high-pressure spray manifolds with targeted nozzle placement to reach internal cavities and difficult-to-clean surfaces. A heated aqueous wash solution was used in place of solvents, reducing environmental impact and operator exposure. An oil skimmer and multi-stage filtration system were added to maintain solution quality and extend bath life. The continuous conveyor design allowed transmissions to be processed inline, increasing throughput and ensuring that parts exited the washer consistently clean and ready for the next stage of reassembly.

Cleaning Method:

A heated aqueous solution combined with high-pressure spray manifolds and multi-stage filtration to reach blind holes, remove oils, and maintain consistent wash quality.



