## **NEWS** from:



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New Product Information—For Immediate Release

## Reuse. Repurpose. Rethink. Arrive at a "new' AGV.

Automotive powertrain supplier uses AGV to handle around the clock operation to support its process equipment

*Greer, SC*—Creform Corporation has designed and built a new custom AGV system, designated the FH-A35046 bolt-on AGV, that uses a recycled and refurbished drive unit, control box/components and photo eye matched up with a new conveyor, new frame, new HMI and new opportunity charging system to arrive at a cost-effective AGV system for an existing automotive powertrain customer.

The single-direction AGV was developed for a specific application with detailed requirements to support the user's "around the clock" operation. Creform developed four AGVs for this specific job recipe to act as transfer vehicles between conveyors at multiple points in the manufacturing process.

The AGV, with overall dimensions of 83" L x 36" W x 60" T features two powered 36 in. high conveyor decks for automatic load transfers. One deck handles right-hand part pallets. The other deck handles the left. Full and empty pallets are handled among the six production stations and follow an approximate 150-foot long magnetic tape guide path. The loads are transferred off one side of each AGV.

Photocells on the AGV load transfer conveyor are used for slow down and stop functions and are also used for secure load verification while the AGV is traveling.

Optical communication devices coordinate the conveyor operation between the AGV and stationary units. Any load shift would be detected and will stop AGV.

Mechanical load safety stops rotate down when pulling into conveyor stations to allow transfers. Gravity causes them to rotate back up when leaving transfer point to ensure that the load is secure. Conveyor sections are covered to help keep loads clean while aboard, while removable and see-through panels provide access for maintenance.

## Reuse. Repurpose...2/ with photo and caption

Embedded photo is for reference only. Hi-res photo is attached as separate file.

Each AGV features a heavy-duty fabricated steel base for strength and rigidity. Forklift tubes are integrated into the frame's design which allows easy and safe lifting for easy maintenance. The units can travel up to 35 M/min and have a load capacity up to 800 lb. (364 kg). Floor positioned RFID tags are used for control of speed and obstacle sensor views.

Each unit incorporates a 24-volt system, powered by two covered 12 V AGM batteries with easy access at the center of the AGV. The opportunity charging system, activated by photocells, minimizes need for the user to manually change batteries. With each circuit of the guidepath, batteries are automatically charged by just pulling into the charging station positioned along the route. No human intervention is necessary. In this application, the AGVs charge at four locations where the units spend most of time. Also, with four chargers and four AGVs, the units can sit on the chargers between shifts for extended charging time.

Safety category 3 features on the AGVs include a safety circuit to cut power, audible warning device, flashing light, E-stops and the Unit features a laser scanner on the leading edge of AGV.

The Creform System is used to create an array of material handling and efficiency enhancing devices and is a proven component in continuous improvement and Lean Manufacturing programs. The company partners with customers in developing and implementing these programs.

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Caption CRE-623: Creform dual conveyor deck AGV.