

Series 35 Lift Mounted to Self Driving Vehicle Creates Turnkey Production Line



The Challenge

A major appliance manufacturer in an attempt to eliminate fork truck traffic in and around the manufacturing assembly lines purchased an OTTO Self-Driving Vehicle from [Clearpath](#) and outfitted the unit with an Autoquip Series 35 lift and powered turntable. The upfront challenges for this new concept were vehicle speed, load stability, finite positioning on the production line P&D stations, as well as battery longevity.

The Autoquip Solution

Autoquip furnished our model 24S40 and powered turntable with 48 volt DC power mounted on the AGV vehicle with a special base frame arrangement for access to the AGV maintenance devices, as well as travel mode load stability as the loads overhang the turntable in both dimensions. A concern regarding load stability was emergency braking in the event the vehicle encountered an obstacle. The AGV furnishes power to the lift and turn through 48 volt DC power.

Fork trucks are now confined to the receiving area where raw materials and processed parts are received and staged for delivery to the assembly area. The fork truck operator's new responsibilities are to continually replenish the P&D stations for the AGVs. A vehicle enters into a station, the lift raises picking the load up off the static stand, exits the station and stops, lowers the load and then rotates perpendicular on the vehicle for travel to the assembly line. Parts replenishment are manually called for from the line operator based on usage. The



same vehicle removes the empty container racks in reverse and returns them to the receiving area. With charging capability a vehicle can quickly recharge itself in minutes and be back up and running for its next assignment.

The Solution Benefits

This is the first of 14 vehicles planned for the assembly process which will be phased in over the course of 12 to 14 months.