

CASE STUDY



Automatic transport via E'gv[®] Compact 10k Tuggers at AER Manufacturing

ABOUT AER MANUFACTURING

AER Manufacturing is a combustion engine manufacturer in the Dallas, TX area. AER builds OEM replacement motors for many major automobile manufacturers in the U.S. such as Ford, GM, and Nissan, and also has their own product line. Between multiple plants in the Dallas area, AER builds all components and completes final assembly of the motors. In the facility where final assembly and shipping occur, AER replaced an aging AGV system with Egemin E'gv[®] Compact Tuggers.

A MUCH-NEEDED UPGRADE

For about 20 years, AER utilized a tugger transport system in their final assembly and shipping facility. Near the end of its life, the high cost of proprietary parts and the requirement of workers to manually move the vehicles throughout the facility was causing a loss in profitability, an increase in downtime, and an increase in labor (or decrease in time spent on assembly).

A search ensued for replacement AGVs. In 2015, Egemin installed two E'gv[®] Compact Tugger units to replace the outdated system. These units are called via buttons at each work station, making transport immediately available when needed. With the replacement units by Egemin, production has gone from a low of 100 engines a day up to 220 engines a day. AER expects that the system will enable production of up to 300 engines a day since the manufacturing labor no longer needs to manually move vehicles between work stations.



OFF-THE-SHELF COMPONENTS

Egemin's AGVs use off-the-shelf components, which enables AER to get replacement parts on demand. This saves AER time and money since the vehicles won't sit in maintenance waiting for a proprietary part for an extended period of time. The fast delivery of spares due to high availability and coupled with lower relative cost compared to proprietary parts means repairs happen faster. Costs & maintenance expenses are reduced and reliability is increased through the use of standard, off-the-shelf parts.

HANDS-OFF AGVs

The Egemin vehicles are less labor intensive in that it is not required that operators leave the production lines and drive the vehicles manually down long hallways; this issue with the AGVs that AER previously utilized dramatically decreased production and also increased labor. Utilizing call buttons to request the Egemin AGVs pick up engines or transport them to shipping has had a major impact on AER's bottom line. Since the vehicles automatically charge when they're awaiting new transport requests, operators do not waste time changing batteries. Production has increased and labor is being used where it should be used.

EXCEPTIONAL SAFETY

Egemin complies with the ANSI B56.5-2012 and EN safety standards and requirements for all offered models/series of AGVs. The installation of the E'gv[®] Compact Tuggers at AER has improved awareness of the automation used in the facility, considerably increased safety for personnel, and reduced product & equipment damage.

EGEMIN IS THE RIGHT CHOICE

Because Egemin provided a hands-off installation process, excellent and immediate customer service via Life Cycle Services, and a product that utilizes off-the-shelf components with high availability all over the country, AER found Egemin to be the right choice for the replacement system. Delivery was about four months after the project began, and installation took only four days. AER expects that because of the decrease in parts costs and better use of employees, the ROI will be approximately 18 months.



E'gv [®] Compact 10k Tugger Specifications	
Manufacturer / Automator	Egemin / Egemin
Installation year	2015
Rated capacity	10,000 lbs / 4535 kg
Overall Height	47.64 in / 1210 mm
Overall length (excluding hitch)	58.5 in / 1486 mm
Overall width	32 in / 813 mm
Speed	200 fpm / 1.02 m/s in forward direction
Type of drive control	Automatic AC
Grade	± 2%
Operating Temperature Range	32° -104° F / 0° - 40° C
Humidity, non-condensing	0-95%
Indoor/Outdoor	Indoor Only
Software	E'tricc [®] , E'tricc [®] +, E'nsor [®]



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