

POSICHARGE CUSTOMER JIM HOUK OF CONTINENTAL AIRLINES WINS INNOVATOR 2003 AWARD

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(From Material Handling Management)

Challenges

The international airline business faces high and rising fuel prices, the continuing impact of Sept. 11, intense regulation, and even more intense competition. As if those weren't enough, the Environmental Protection Agency (EPA) is demanding that the industry improve fair quality by reducing emissions. Continental Airlines, like all the major lines, shares these and many more challenges with its global competitors.

Jim Houk is GSE Systemwide Manager at Continental. He's responsible for managing all ground support equipment shops, specifying and demonstrating new equipment, determining reliability and developing a fleet of low-emission motorized equipment. At the Houston facility, Continental's largest hub, the airline has 6,300 pieces of motorized equipment, including roughly 275 lift trucks and 100 electric towing tractors, as well as more than 9,000 non-motorized carts and dollies.

Our biggest challenge was in meeting the new EPA mandates and state regulations on air pollution," says Houck. "Gasoline-powered equipment was producing too high a level of emissions, and so was propane, and the addition of catalytic converters wasn't feasible on a large scale. It was clear that we needed to convert more equipment to electric power, but we had performance requirements to think about, and we didn't want to sacrifice that operational performance for a lot of recharging time."

Then, there was the problem of battery charging time. Houck says electric equipment was fine, but with a typical seven-hour charging period, conventional charging methods proved to be too slow for an airline hub environment.

Innovation

To service all the batteries required by an expanded electric-powered ground support equipment fleet, Houck and his GSE team decided on a fast-charging system. Working with AeroVironment, he found a charging system that recognizes all different equipment and voltages. The fast charging system identifies the battery size and type, voltage, battery temperature, and even notes the last time the battery was equalized. Houck worked with the local Toyota lift truck dealer to install the circuitry, battery cold plugs and charging receptacles needed.

By reducing the room and labor required for battery charging,” Houck says, “we felt we could get batteries charged in an hour. The time required to fast-charge a battery from 20 percent charge to the range of 80 to 100 percent was provided by shift changes and break times.

Houck selected Toyota’s 7-series electric pneumatic lift trucks, which are AC-powered. “The AC drive has the power we need, and it actually rivals IC power,” he says. “With the pneumatic tires, it’s perfectly suited for outdoor use. Plus, we’re noticing a huge difference in maintenance because we don’t have to change motor brushes.”

Results

Increasing the number of electric-powered ground support equipment, and switching to fast-charging systems, produced many benefits for Continental.

First, of course, were the benefits to the environment. Jim Houck says, “Continental takes pride in reducing emissions and in making a positive impact on the environment.

Then, there are the economic benefits. Continental has experienced tremendous reductions in maintenance and fuel costs on its ground support equipment. Maintenance costs are down 60 to 70 percent where gasoline-powered equipment was replaced by fast-charging electrics. The operator is no longer responsible for battery management, which is cost effective.

Plus, Continental now uses battery charger single plugs and receptacles, which makes snapping the plugs in and out much easier. Operators can now disconnect with one hand. That, plus not having to take operators’ time for fuel and fluid checks, saves a lot of time.

About PosiCharge

PosiCharge is the faster, safer, smarter charger that eliminates the battery room and all the problems that go with it – including run time issues, reduced battery capacity, infrastructure cost, lost productivity, worker injury, and excess battery inventories. PosiCharge fast charges each battery in the vehicle during short breaks, lunches, and shift changes, so the battery never leaves the vehicle. The result is instant productivity improvements, and no workflow interruptions for battery changing. With a proprietary system that safeguards batteries by measuring temperature and customizing each charge, PosiCharge can actually extend the useful life of a battery. For years, PosiCharge has been keeping fleets running in some of the hardest-working Fortune and Global 500 plants and DCs in the country. PosiCharge is a division of AeroVironment, Inc.

About AeroVironment Inc.

AeroVironment develops innovative technology for energy efficient systems and unmanned aerial vehicles (UAV) and leverages its intellectual property base into breakthrough commercial ventures. AeroVironment (www.aerovironment.com) was

founded in 1971, and its Monrovia, Calif. headquarters is home to more than 200 engineers, physicists and business managers specializing in cutting-edge research and development, new venture development, manufacturing and marketing.

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