

Health and Safety

Litter Picking at JFK

With 5,000 acres to maintain, the Port Authority of New York and New Jersey's JFK airport presents some significant FOD problems.

A seldom-mentioned aspect of airport maintenance is the difficult task of clearing unsightly and potentially hazardous debris from grassy regions. At JFK, there are 1,000 acres of so-called secondary or deceptive areas surrounding the airport's four runways. Mowing the grass further exposes this litter.

"In the aeronautical areas we can't use workers on foot to pick up the debris by hand or with stabbers," says Bob Pfister, Maintenance Supervisor at JFK. "In addition to the safety concerns, it's too costly and time-consuming. But the job has to be done."

JFK's maintenance department found a way to solve all those problems. It's the Litter Picker (LP 1) and a newer model, powerful and durable equipment manufactured by a Naugatuck, Connecticut firm, H. Barber & Sons. Barber developed the basic technology for the Litter Picker about 35 years ago when the company's founder



The Litter Picker enhances airport appearance and provides an important safety function (photo: H. Barber & Sons).

designed a beach cleaner called the Surf Rake.

Pfister points out that secondary area debris at JFK includes a lot of paper and various forms of plastic. And, although some areas are as much as 2,000 feet away from buildings and terminals, there are also shrink wrappings, cargo straps, nuts and bolts and other parts from ground support equipment, and small metal casters that fall off loading pallets or ramps.

Such debris is not just an eyesore. In addition to fouling or damaging mowers, it represents a potential hazard to aircraft.

"We tested a lot of different equipment for this job," says Pfister. "We tried everything

including vacuum sweepers. Nothing seemed to work well."

Then one day, while Pfister was attending New York City Park Department's annual Vehicle and Equipment Rodeo show for vendors at Randall's Island, his eye was caught by an electric lime green machine tucked away in one of the booths. That was Barber's Litter Picker.

The color may have attracted Pfister, but the performance of the equipment at a demonstration convinced both Pfister and his boss Andy Perrone, JFK's Chief of Maintenance, that they had found the answer to their grassy area problem.

"We did a walk through in [JFK's] Building 14," Pfister says,





Barber's engineers eventually came up with a plan to link two Litter Pickers.

“and then took the vehicle ramp side to put it through actual on-site testing. The Litter Picker performed to the highest standards. It got the debris, the FOD, rocks, and it even picked up pieces of asphalt and concrete in areas where construction had taken place.”

And Perrone and Pfister noticed something else. The machine picked up a lot of grass clippings too, and it aerated the high ground. “We picked up as many as 20-30 cubic yards of clippings during the demo,” Pfister says.

“After using the Litter Picker for a few months, we noticed the airport had a green pasture between runways and taxiways and in deceptive areas,” Pfister remarks. “It had enhanced the appearance of the airport where it counted—where passengers on the aircraft could see it.” Within a few months they had ordered first one, and then a second Litter Picker.

Adapting technology developed originally for its Surf Rake, Barber's Litter Picker uses stainless steel spring tines mounted on a bar flight conveyor to comb through grass and lift debris, carrying it up to a four-cubic-foot hopper. The hopper can be raised and dumped into conventional dump trucks or 20-30 yard dumpsters.

Less than 8-1/2 feet wide, 8 feet high, and 13 feet long, the LP 1 can be operated by one person from the seat of a towing tractor. The company recommends a 40-60 HP tractor be used.

The LP 1 can clean an area 7 feet wide and clears up to 8 acres an hour. But that is literally just half the story. The other half results from a budget constraint and some creative thinking by Pfister and Perrone.

Excited about the Litter Picker's performance from the start, Andy Perrone wanted more; in fact, he

wanted at least two more. JFK found, however, that while it could budget for the equipment, it could add just one operator. That's when Perrone had a new idea. “What if two Litter Pickers could be linked?” he asked Barber.

Within a few months, Barber's engineers came up with a way to do just that. They calculated the stresses that would result from linking two machines. They designed a new front hitch. They modified the hydraulics. All the while they maintained a continuous dialog with folks at the Port Authority, sending pictures at stages to update the maintenance department on the progress of the new Litter Picker.

The result is the LP 1 Dual, a combination of two machines that extends the cleaning area to 14 feet and can be run from just one console by one operator. The Dual requires a larger tractor, but JFK's maintenance department already owned one so no added costs were incurred.

“This new unit gives us more bang for the buck,” Pfister says. “We get double the cleaning width. It's more efficient. One driver does the work of two. And we can cover the area more often—cycles are shorter.”

Service and reliability were two other factors which determined choosing the Litter Picker for a Dual model. The Port Authority was very pleased with the single LP 1s. Those original units had required virtually no significant maintenance over the two previous years. The Dual has a similar record. ❖

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H. Barber & Sons, Inc. markets its line of equipment to municipalities, state departments of transportation and other airports as well as golf courses, and corporate venues.

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