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News

FOD BOSSes are a new way to clean up an old problem

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There's a new BOSS on the Dryden flightline and it's making a clean sweep of preventing foreign object damage (FOD).

Bob Cummings, aviation ground safety officer, and John Lapointe, aviation ground safety manager, saw the tool at a FOD Conference in Los Angeles this fall and asked Brad Flick, acting chief of the Maintenance Division if the Maintenance Division could use the tool if it was purchased. A partnership was forged among the FOD fighters.

"FOD effects everyone. FOD is always an issue," Lapointe said.

In December, the cooperative effort of Safety and Flight Operations (the Maintenance Division is a part of Flight Ops) paid off with the premier of the two new Dryden FOD BOSSes on the Dryden flightline and ramps.

"It is everybody's responsibility at NASA. Everyone must pick up loose garbage, especially with the wind. A cup out here now can end up on the flightline. We are looking for better ways to address FOD issues and we came across this tool," Lapointe said.

The FOD BOSS is a tool designed to remove whatever doesn't belong on the flightline and ramps. It can be towed behind a vehicle - as many as three can be towed together - and collect items while it moves. Dirt, gravel, washers, nails, screws - anything - is collected for disposal.

Currently, a ramp sweeper - which works much like a vacuum cleaner - is used to clean up areas where there are aircraft. Now, it will alternate with the FOD BOSSes which "use the force of friction and a series of specially designed brushes to capture debris, then hold it up in a retaining mesh. It operates completely through the energy generated by the vehicle pulling it along," the FOD BOSS Web site states.

Using the ramp sweeper is time consuming and doesn't cover as much area as the FOD BOSSes, Lapointe said.

Rocks are the biggest pieces of FOD, followed by construction hardware such as screws, washers and nails. Although outside construction crews are taught about FOD and its potential effects on aircraft, from time-to-time hardware is found where aircraft are located.

The FOD BOSS looks like a big carpet, but the bristles brush as they go and so far it has proven it does a good job.

The partnership with Safety on the FOD BOSS appears to be working well, Flick said.

"We are all looking out for everybody's well being. The coordination on this was good. Anything we can do to improve, we will do," Flick said. "The FOD BOSS is less expensive and easier to operate. The alternative is the mechanical sweeper."

Kay and Associates incorporated the new tools into its sweeping operations on the flightline. For now, the new tools are used on alternating weeks with the ramp sweeper. Kay and Associates employees said they have been impressed with the results so far.

"I was really impressed the first time I used it. Look, it picked up items like paper clips," said Scott Rogers, a Kay and Associates employee, wading through a box of debris collected the first time the FOD BOSS was used.

Rogers and Kay and Associates employee Tim Coghlan noted that the tool covers 16 feet at a time towing two FOD BOSS tools, versus seven feet at a time with the ramp sweeper. The FOD BOSS so far has picked up more than the ramp sweeper as evidenced by boxes of material collected on



*Kay and Associates employees Scott Rogers and Tim Coghlan use the FOD BOSS tools to sweep the flightline.
NASA Photo / Tony Landis*

the FOD BOSS' first work on the Dryden flightline. Two boxes of debris, including rivets, paper clips, and safety wire were collected.

The FOD BOSS also can be used in the rain and through puddles and can be towed at speeds of up to 25 mph.

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