

A neat achievement

‘Clean as you go’ isn’t just a simple saying; here’s how it became a quality-boosting solution

By CHRISTINE HILL

Cleaning up small messes before they grow is a simple life lesson. The concept is more challenging when it relates to objects that don’t belong in an aircraft but are left behind during manufacturing. Known as foreign object debris, or “FOD,” unintentional leave-behinds can cause damage that mounts with every shake, rattle or roll.

Teams that build the vertical tail for the 777 have learned the “clean as you go” lesson so well that in October they delivered their 34th consecutive FOD-free unit. It wasn’t an easy milestone to reach, but their simple approach and steady commitment to the challenge paid off.

A year ago, nearly every unit the teams delivered to downstream assembly customers included at least one piece of FOD. Ranging from “pigtales” (broken-off fastener pieces) to hammers, undetected FOD can be disastrous. Robust inspection processes keep the worst from happening. But relying on inspections didn’t seem right to tail assembly team leaders at Commercial Airplanes Fabrication’s Composite Manufacturing Center in Frederickson, Wash.

So Bobby Jones, who led the first-shift team, met with Frank Minnick, the second-shift lead, and they set a simple plan in motion: Teach people how to “clean as you go.” Communicate regularly. Recognize incremental improvement in small but meaningful ways. And ensure process consistency between both shifts.

Jones and Minnick began consulting with Quality Assurance inspectors to learn good shakedown techniques.

“We started by showing everyone the ‘Braille’ system—fingers all the way down the stringers and poking into all the cracks the vacuums can’t reach,” Minnick said. With the thickness of the 43-foot-long vertical tail narrowing from 2 feet to about 6 inches at the tip (13.1 meters, 61 centimeters and 15 centimeters, respectively), hands-on checks were the only sure way. Other lessons included clearing the inside of a subassembly after every task and wiping down the outside, undertaking thor-

ough visual checks, and ensuring toolbox accountability.

“We all wanted to get better, so we started talking a lot about doing quality work, keeping it FOD-free, and running our processes correctly,” said Ken Schimon, who recently replaced Jones as the first-shift team lead.

Before long, the teams delivered their first FOD-free unit in a while, and everyone got movie tickets.

“Once we got one, we wanted another one,” Schimon said. He and Minnick began focusing on better communications between the shifts, starting with their own daily ties to make sure any parts or tools missing on one shift were hunted down on the next.

The third FOD-free unit garnered the teams another small reward. The 10th brought a dinner and a growing sense of accomplishment.

The 30th? “It’s about taking pride in our work,” said second-shift mechanic Tom Chubb. “Our unit ships to another control code once it leaves our area. They used to tell us they were finding our FOD. Now our philosophy is, ‘Why should they have to clean up after us?’” ■

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Ken Schimon (left) and Frank Minnick use mirrors and hands to check for foreign object debris inside a 777 vertical tail assembly. The two lead first- and second-shift teams that eliminated FOD from 34 consecutive 777 tail wing assemblies.

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