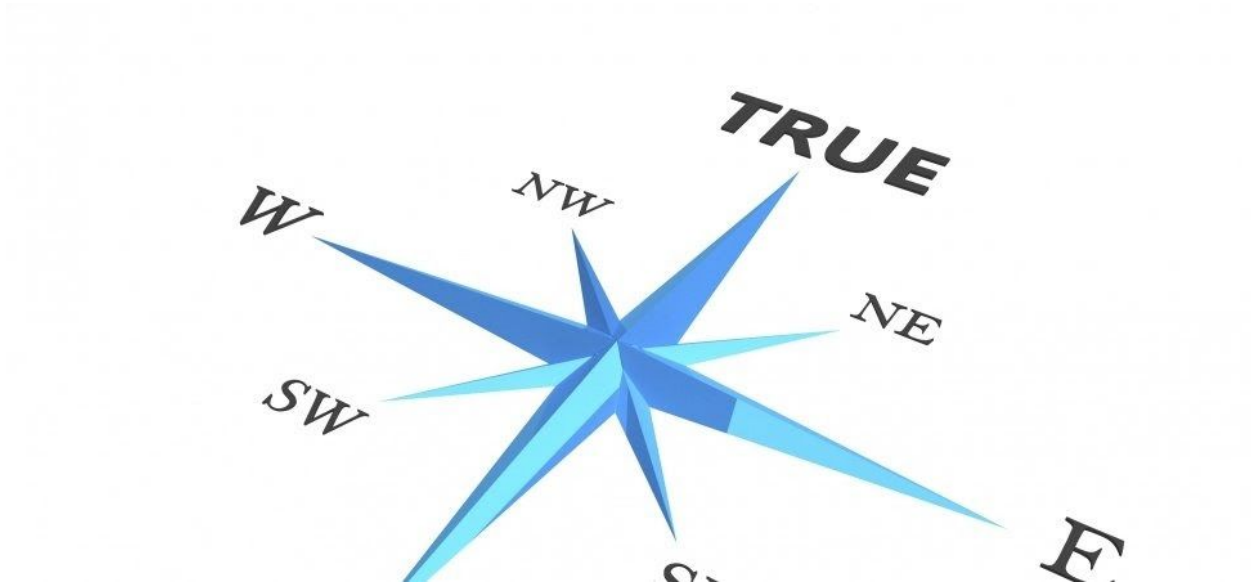
True North



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When upper management puts a wall

between themselves and their employees, bad things can happen. Case in point: Boeing.

In 2009, airlines were scrambling to order the Boeing 787 Dreamliner, one of the most advanced and highly sought-after new passenger jets in the world. and Boeing responded by building a manufacturing facility just outside of Charleston, SC, dedicated to 787 production.

Unfortunately, sub-standard production and poor oversight have led to serious safety concerns.

Workers had complained of poor manufacturing practices including debris left on planes (akin to a surgeon leaving his scalpel inside a patient during surgery) and other shoddy practices, but they were also being pressured not to report these safety violations.

Recently, the New York Times reviewed hundreds of internal emails and corporate documents, interviews with current and former Boeing employees, and federal records. The investigation revealed a policy that valued production speed over quality, as evidenced by multiple reports of management ignoring complaints and concerns voiced by employees.

In light of the demand for the Dreamliner, it's understandable that management pushed its employees to speed up production. But the hectic pace didn't allow for quality control - and similar issues may have been the cause of Boeing 737 crashes that were due to a faulty anti-stall system.

Now, the safety concerns at the Charleston plant have had serious repercussions including delayed deliveries, order cancellations, and a significant drop in the perception of Boeing as a company that puts its passengers first.

Current and former Boeing employees have filed whistleblower claims with federal authorities, citing defective manufacturing practices and being pressured not to report safety concerns. Some employees have gone so far as to file lawsuits against Boeing, saying that management frequently retaliated against employees who brought up violations and mistakes.

In an industry where passenger safety should be the #1 priority, the concerns involving the 787 and the 737 Max have led to closer industry-wide scrutiny from regulators. In the case of Boeing, it appears to be a case of misplaced priorities: profits over safety. Boeing's management is now in the hot seat trying to defend its policies.

According to Kevin McAllister, Boeing's head of commercial airplanes, said in a statement, "Boeing South Carolina teammates are producing the highest levels of quality in our history. I am proud of our teams' exceptional commitment to quality and stand behind the work they do each and every day."

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Every manufacturing plant deals with errors and oversights. To be fair, to date there is no evidence that the situation in the Charleston plant played any part in crashes, and many airlines are still standing by Boeing airplanes as the workhorses of their fleets.

However, when workers make dangerous mistakes and others fear retaliation if they report those mistakes… including installation of faulty parts and debris left in the immediate vicinity of electrical systems… and management makes an effort to squash those reports - then, we have a problem.

John Barnett, a retired quality control manager at Boeing, discovered - not just on one plane, but on several - clusters of sharp metal slivers hanging dangerously close to the flight control wiring. Should one of those shards penetrate the wires' housing and cause a short or a fire, the results would be "catastrophic." Barnett has filed a whistleblower complaint after repeated refusals by management to address the issue after he implored them to remove the slivers. Instead, they moved him to another part of the plant.

Lynn Lunsford, spokeswoman for the Federal Aviation Administration said that the FAA had inspected several planes and indeed found this debris… on planes *certified by Boeing as being completely clean.* The FAA responded in 2017 with a directive that all Dreamliners be cleared of all shavings before delivery. Boeing officials insisted the company was in compliance with the directive and that the issue does not present a safety hazard during flight.

"As a quality manager at Boeing, you're the last line of defense before a defect makes it out to the flying public," Mr. Barnett said. "And I haven't seen a plane out of Charleston yet that I'd put my name on saying it's safe and airworthy."

Problems at a plane factory in South Carolina led some workers to question whether safety was always the company's first priority.

"Swampy," the nickname former Boeing quality manager John Barnett goes by, is deeply disturbed by the situation. With two 737 Max jets having crashed (Indonesian and Ethiopian carriers), competitive pressure overriding safety concerns is finally coming to light. Specifically, faulty sensors on new 737 Max jets can send the plane into a nosedive and cause pilots to lose control.

The frenzied competitive pace is the origin of engineering and manufacturing decisions… but the buck ultimately stops with management that deliberately chooses to ignore employee concerns.

Several whistleblowers have come forward because their concerns were dismissed - or they were threatened with retaliation - and as a result of multiple people coming forward, the situation has gotten the attention of the FAA.

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“Swampy” says, “New airplane, new technology, state-of-the-art. That’s why it’s the Dreamliner, because it’s our future. Fully composite, carbon fiber-reinforced…”

With growing concern about whether Boeing would be able to deliver the promised Dreamliners to eager airlines, a new plant was opened in Charleston. The new plant promised to create 3,800 local jobs. However, Charleston doesn’t have a history of aerospace engineering or manufacturing. According to Swampy, “They hired a lot of people from the South Carolina state that really had no experience with building airplanes, and building commercial airplanes, and understanding what procedures were, and the criticality of them. So that was the big difference I saw was that they just didn’t have the experience down here.”

Boeing worked hard to train their new workforce, but being far behind on the 787 program, production was the priority and within a few years, the FAA grounded the Dreamliner because of faulty batteries that were overheating, which could cause fires. The Dreamliner was grounded until Boeing could prove to the FAA that the problem was resolved.

Which, they did. But the batteries weren’t the only problem.

As a quality control manager, part of Swampy’s job was to inspect the insides of planes to ensure that no debris was being left inside the finished aircraft.

Swampy said, “So I was called out to the airplane to look at an issue. And that’s where we discovered all this debris, these three-inch-long titanium slivers laying around. It’s just debris everywhere. The risk here is these metal slivers will migrate into a power panel, any kind of power, any kind of electronic equipment, and short it out and cause a fire. And if it’s at 40,000 feet, that’s a problem.”

When asked if that was normal, Swampy’s response was a vehement “NO.”

Swampy brought up the issue with his managers, physically showing one of them the debris. He told the manager, “I won’t sign off on it. I won’t accept it.”

Swampy was promptly moved to another part of the plant. The plane was delivered without having been cleaned of debris.

Swampy and several other employees noticed much more than metal shards left inside the guts of the new airplanes: nuts and bolts, trash, wrappers, fasteners, rags, and even tools… including a ladder. A *ladder.*

With regards to safety, Swampy says, “I’d say, probably about 60 percent of the stuff, I would agree. It’s sloppy. But just shooting from the hip, I mean, 40 percent of this is critical stuff. I mean, look, you got metal shavings floating around the electronics equipment.”

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Planes experience sometimes significant vibration during flight, which could easily dislodge a stray bolt… metal shard… *ladder…* and some of those parts could migrate into the engines and cause catastrophic engine malfunction.

Although Swampy was deeply concerned about the sloppiness of the work, he's ultimately more concerned about defective parts going missing and being used… and when the situation is brought to the attention of inspectors, they are told "don't worry about it." Someone got a part from a pile of defective parts (painted red to mark them defective)... *removed the paint…* and used the part. With management approval. The FAA investigated and found that indeed, defective parts were missing, but they had no proof that the parts had been reused. Given the intense production pressures, Swampy isn't surprised by the decision to install a defective part - but he is upset by it.

He says, "In fact, I had one senior manager one day tell me that — actually, there were a few of us standing around talking about inspection, and he said, we don't need inspectors. These planes are too smart to fall out the sky. It's like, oh my God, with that mentality running the show down here? That's scary."

The entire company culture seemed to be "production at any cost."

Managers were rewarded for production. They are incentivized NOT to report defects or problems.

Naturally, Boeing insists that there is no cultural problem at play. They insist that safety is its number one priority; and that safety and production CAN coexist. Yes, the Dreamliner has a spotless safety record. But the reality is, people are people. And sometimes, people make poor decisions.

The bigger question is, does the intense pressure to produce cause some senior-level managers to turn a blind eye to problems?

Swampy says, "As a quality manager at Boeing, you're the last line of defense before a defect makes it out to the flying public. So as a quality manager, being the last line of defense, that's a huge responsibility. Everything I put my name on, I'm certifying that it meets the requirements, the regulatory requirements, is in safe, airworthy condition. And I haven't seen a plane out of Charleston yet that I'd put my name on that's saying it's safe and airworthy."

This is coming from one employee who retired because he felt pressured to avoid reporting violations. And his story has been corroborated by other whistleblowers.

When asked by the NYT investigative reporter if he would fly on a 787 Dreamliner built in Charleston, Swampy answered, "No, ma'am. You couldn't pay me. Uh-uh."

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Shortly after the second 737 Max crash, Boeing called an urgent employee meeting around the fact that customers were finding debris and random objects on new airplanes.

A senior manager reportedly implored workers to step up their quality game, saying, “The company is going through a very difficult time right now.”

To be fair, foreign object debris is a common challenge during the airplane manufacturing process. Employees are supposed to vacuum out the areas they work on, but debris has remained an ongoing problem at the Charleston plant where current and former workers complain of a losing battle with debris.

“I’ve found tubes of sealant, nuts, stuff from the build process,” said Rich Mester, a former technician who inspected planes before delivery.

Mester was fired by Boeing. The National Labor Relations Board has filed a claim over his termination.

Back to the ladder, which was found inside the tail of an airplane, dangerously close to the gears of the plane’s horizontal stabilizer. “It could have locked up the gears,” Mester said.

In other cases, loose objects were found touching electrical wiring and rags were found near the landing gear. Another quality manager said he would collect debris in zip-lock bags to show to Dave Carbon, one of the plant’s top executives.

Fortunately, the airlines themselves inspect the airplanes they receive from Boeing. According to Ross Feinstein, a spokesman for American Airlines, says the airline conducts rigorous inspections of new planes before putting them into service. “We have confidence in the 787s we have in our fleet.”

In 2014, when the Dreamliner was in hot competition with the Airbus A350 and quality was starting to be pushed aside in favor of speed, two former managers - Jennifer Jacobsen and David McClaughlin, filed complaints with the FAA. The two had been urged to cover up production delays and make it look to shareholders and Boeing executives that Dreamliner production was on time when in fact it was seriously behind schedule. At the time, the FAA visited the plant but didn’t find any violations, although it had in the past. Jacobsen and McClaughlin were fired, accused of inaccurate timesheet management. They both claim that this was retaliation for bringing up violations.

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Cynthia Kitchens, another former quality manager, claims her superiors punished her after she flagged safety violations; and other former employees said that high-level managers pressured internal quality inspectors to stop recording defects. “It was intimidation,” she said. “Every time I started finding stuff, I was harassed.”

Some employees said they had been punished or fired when they voiced concerns.

In 2014, Swampy was reprimanded for documenting errors, which he took to mean “don’t put problems in writing.”

The pace of production has accelerated in Charleston, up to 14 Dreamliners from 12. And, most disturbingly, Boeing has admitted that it was eliminating nearly 100 quality control positions at the plant.

“They’re trying to shorten the time of manufacturing,” said Mester, “But are you willing to sacrifice the safety of our product to maximize profit?”

Final Thoughts

Although both Boeing and the FAA haven’t been able to confirm that the complaints documented by Boeing’s employees are the root cause for the recent crashes of Boeing planes in Ethiopia and Indonesia, the complaints made by their employees regarding quality and safety issues suggests that there are critical issues in their work environment when employees feel that their only recourse to have their voices heard is to contact the New York Times and FAA.

What does it say about leadership when the FAA confirms that debris has indeed been left inside of airplanes? How can the need to get airplanes into the marketplace supersede ensuring the job is performed correctly and debris is removed from the airplane’s housing?

Even if it can’t be confirmed that the debris left behind could contribute to an airplane’s malfunction it is clear that it doesn’t belong and serves no purpose. The complaints from front line employees regarding debris is about their desire to do the job right and their commitment to both quality excellence and safety. It’s about not leaving any room for doubt of potential risks. That is what airline passengers expect and assume is happening when they take their seat on an airplane

A commitment to quality excellence gives Boeing customers confidence, because they know if the routine items have been focused on and corrected then the more complex problems have been as well - if they can’t get *this* right, what else did they miss?

When this level of commitment is not in place, the employees on the front lines are the first to know. When front-line employees display the courage to raise their concerns it says that they

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have bought in to the mission, vision and values of the company. When they feel like they have to go outside of the company to ensure actions are taken to correct the issues they have brought forward it signifies that their leaders are ambivalent about their role in staying true to the mission, vision and values of the company.

The mission, vision and values point to the true north position.

Whenever there is uncertainty regarding the direction of the company, a good leader, similar to a good Eagle Scout, should find true north to determine the correct direction to move in.

This is why the best companies create mission statements that details their values and create a vision for the future of the company that all employees can connect to and follow.

On Boeing's website they list "Our Vision, Our Principles & 2025 goals. Under the section for their Enduring Values they list Integrity, Quality and Safety as 3 of their core values. It's clear that frontline employees are focused on True North by raising their concerns. The enduring questions are has the pressure of competing demands created fear for leadership and caused them to lose faith in their ability to find True North? Will shareholder value and consumer confidence suffer as a result? Time will tell, and the world will be watching.