

By James Collins

The US Navy is an enormous force. It is not to be trifled with by anyone. I witnessed the massive power behind the U.S. Navy when I was an engineering manager supporting the Naval Air rework facility (NARF) at Alameda Air Station California in 1978..

I was delivering major elements for the VAST program to aircraft carriers on the west coast. This system checked out each aircraft on a carrier immediately before launch to verify all operating systems were functioning properly. We were the prime program manager for these elements. In dealing with the Navy, I expressed my admiration for the way they handled these massive aircraft carriers. The engineer I was working with said, "If you think these are impressive you have to see how we handle total aircraft overhaul in our facility in Alameda."

He then took me to the largest aircraft hangar I had ever seen. I went up about four stories to an observation area which was next to their conference rooms. Looking down. From this four-story height, I witnessed an array of thirty multi engine aircraft in two rows under the roof of this hangar. Fifteen were parked in a single row facing left to the right close to me. Another row of fifteen on the other side were facing from right to left parallel to the first row. Each aircraft was in a large open area workstation. There were an equal number of aircraft and spaces. I counted them. There were 15 on each side and each bay held an aircraft in some state of disassembly. I asked him what was going on.

He explained that these were the P3 Orion antisubmarine aircraft that patrolled the entire west coast of America. The Navy engineer explained to me that the Navy scheduled every aircraft in this fleet for a total tear down and repair overhaul annually.

The system was a perfect assembly and disassembly composite. There were 30 separate work bays. The flow was continuous. Planes entered to my left and progressed through each of the thirty bays. The first 15 were disassembly while the last 15 were for reassembly. Each day every plane advanced one position. That meant a worn out plane came in on the first bay. Thirty days later that plane, now effectively a new manufacture, exited from the final bay. Meantime it under went complete disassemble. Personnel removed each operating system at a specific disassembly bay and then reassembled and repainted it at another designated bay where they installed brand-new equipment.

Removed equipment is routed to other various NARFs. At those remote locations each instrument, wiring assembly, hydraulic assembly, navigation, and communication equipment is taken apart and overhauled. That unique facility totally reassembled, retested, repainted, and refurbished the assemblies and returned them to stock status.

What I witnessed was the 30-day schedule for disassembly and reassembly of every aspect of each aircraft. To my left an aircraft from the fleet entered and was assigned a repair number and a logbook. At the first location bay, they lifted the aircraft up, removed

the landing gear and then placed it on a moving platform. At position two, they removed the engines. At position three, they opened the doors to the interior of the aircraft and remove all of the aircraft instruments in the cockpit. This went on for 15 locations where they removed all the hydraulic equipment, all the electrical cabling, the fuel lines, the wings, the ailerons the external pitot tubes, radios, communications gear, and every other repairable aspect of the aircraft. At position 15, the line finished disassembly. The aircraft was down to a shell and they moved it over to the second line. Now they reversed its direction and it entered a line of 15 additional bays for reassembly. At each corresponding position, mechanics and technicians installed brand new equipment that replaced the equipment previously removed. Day by day at each bay, they reinstalled every piece of equipment in the aircraft, checked it out, and verified it. The following day the aircraft with new additions moved to the next position. At position 30, they lifted the aircraft off the dollies that were transporting them and reinstalled new landing gear. Then a new coat of paint was applied . On day 31, it came out and reentered the fleet. The process was ongoing and enormous,

The feeling I came away with is we are safe with the US NAVY. We can all sleep at night. Dedicated personnel protect us with unbelievable capability.

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