

An Officer at the Air Force Institute of Technology (AFIT), McDonnell Douglas Aircraft, was party to discussions surrounding a problem with F-4 hydraulic systems, one that affected delivery of critical combat aircraft. He learned a valuable lesson about listening.

Background:

It was customary for airplanes to be removed from production for servicing and arming of the aircraft prior to flight test. At some point during a ground test an engine start resulted in a deluge of hydraulic oil. Fire suppression was activated, the engine was shut down, and close inspection revealed the problem was in an engine driven hydraulic pump. New pumps were installed and a new start up procedure initiated, with identical results. One incident could have been component failure but a second event raised the hackles of management. A second aircraft was soon ready for arming and test. This time, with a cast of “thousands’ watching, the engines were started and once again a cloud of oil descended over the assembled crowd. Bill, (plant manager) was livid! He asked me what I thought. I said, “The problem must be common to both hydraulic pumps, which means that something has changed without the knowledge of the system. Find out what is different between these pumps and any other hydraulic pump.” Engineering was sent to review the spreadsheets and build sheets of the affected pumps while looking for “what has changed.” No discrepancies were found. Components met specifications and Procedures had been followed.

I had previously become associated with a MCAIR employee by the name of Carl, and because we had common interests we became good friends. I approached him with the observed problem. He remarked, “Al, you need to also **ask about the people**, not just the hardware.” So when I returned to work, I asked Bill if he had looked for any changes in people as well as components. He raised his eyebrows and said, “Hell no! Why didn’t think of that?” It was no time at all until the shop foreman related that a production worker in the hydraulic assembly line by the name of “JOE” had recently retired, *and he had previously been responsible for final assembly of hydraulic pumps on the F-4.* GO find Joe!

After learning that Joe was likely fishing, a courier was sent to find him. His first words were, “I knew you’d come sooner or later. I have tried for years to appease engineering and tell them their procedures called for installing the hydraulic seals backwards, but they would not **listen** to me. So every day, on every pump of the new configuration, I reversed the seals before sending them out with the airplane for final delivery. I reminded them often enough, but since I was not an engineer, **no one would listen to me.**”

Bill fixed engineering. The problem went away. The airplanes were delivered on time!

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