

Tanks for the Lesson

By AME1 Morrison

Our Hornet squadron's workload was heavy, but we were used to it. Maintenance control asked us to troubleshoot an MSP 833 code (secondary bleed-air overpressure switch). The same discrepancy existed on the last five flights. That obvious sign should have caught our attention; it didn't.

We followed the troubleshooting procedures in the publications and found the secondary bleed-air overpressure switch was bad. I went to the publication for the part number and ordered the switch. We installed it and did a low-power turn to verify it worked and checked for leaks. After 20 minutes of turning the jet, the MSP 833 did not appear, and the system worked as advertised. As far as we were concerned, the aircraft was ready for the next day's flight schedule.

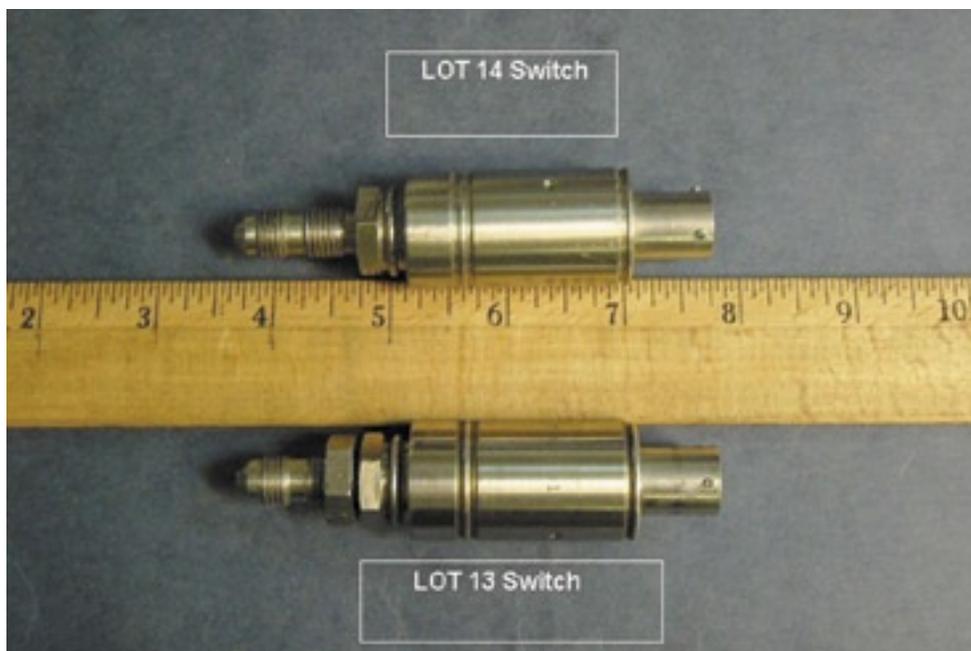
During the next flight, the pilot received dual bleed-off cautions, no ECS flow, and no OBOGS. While returning to the ship, the pilot could not transfer 2,000 pounds of fuel from the two drop tanks. Our XO called the shop and asked if the pilot could do anything to get the ECS working again. I recommended cycling the bleeds, and he told me they already had tried it, with no luck. He made the call to jettison both drop tanks and land. The pilot returned to the ship safely.

A closer look showed that the MSP 833 code had returned. We troubleshooted some more and again found the switch bad. I ordered another switch and passed the job to night check. Maintenance control directed the shop to cannibalize the switch from another jet. The MSP 833 code still was present after they replaced the switch. Further troubleshooting revealed pin 111 on the SDC was pushed and had caused the MSP code 833. The AE shop repaired the pushed pin, and the MSP code 833 cleared.

Maintenance control discussed the gripe at length with the shop and concluded that something other than the recessed pin must have caused the bleeds to shut off. Night check found the wrong switch had been ordered both times, and the cannibalized switch was wrong, too. I had failed to check the "usable on" code before ordering the switch. The ones installed were for lot 13 aircraft, and this aircraft was a lot 14. The switches physically looked identical, but the operating characteristics were different. The lower lot switch has lower pressure parameters, which caused the primary regulating valve and secondary valve to shut off once the aircraft reached afterburner off the catapult shot.

Looking back, I realized my first mistake was ordering

the first part number on a list of three without checking the "usable on" code. The second mistake came when we swapped switches between different lot aircraft without checking the pubs. Our squadron learned a valuable lesson about maintaining different lot aircraft. You have to check everything against the pubs and can't rely on the local subject-matter expert. It is just as important to take time and make sure your troops know how to use the pubs; it will save time in the long run. We were fortunate on this flight. The cost of the lesson, however, was two drop tanks. 🍀



Managing parts for multi-lot aircraft can be a challenge.