

Keeping the Fleet Operational



By Pete Worley and Mark Gindele

Did you see that?" said one aviation boatswain's mate (AB) to another on the flight deck of *Harry S. Truman* (CVN 75).

"See what?" responded his shipmate.

"When that *Hornet* hit the three wire, the cable looked like it never has before. I think something's wrong."

"You're crazy," said the second AB. "There's nothing wrong. This is a brand-new ship. Stop thinking so hard."

Indeed, *Truman* is a new ship, the latest *Nimitz*-

class carrier to be commissioned. CVN 75 has been going through its "shake and bake" tours off the Atlantic coast. These sea trials give the Navy a chance to test all the systems in an operational environment before a carrier deploys. In December 1998 *Truman* was practicing launches and recoveries of the F/A-18 *Hornet*.

Landing on the deck of a moving carrier is always tricky, something that can't be practiced enough, and trying to catch the number three wire each time increases the stakes. But this is what Naval Aviation



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is all about: the aircrew is briefed on the mission, launches from the carrier, does the job and returns to the "boat" tasked with landing a high-performance aircraft at speeds in excess of 130 mph and catching a steel cable to stop the plane within 300 feet. With all the other challenges that the aircrew faces, they must have confidence in the launch and recovery equipment (ALRE)—their lives depend on it. On this particular day, the AB was doing what ABs are supposed to do: question system performance.

Since *Truman's* commissioning, the crew had documented abnormal wear on all arresting gear pendant engines. Ship inspectors localized most of the accelerated wear to the area where the arresting cables are passed through top-side retractable sheaves (covers for the pulleys that allow the cable to be stretched across the deck). The crew developed a temporary fix, then contacted the ALRE designers at Naval Air Warfare Center Aircraft Division Lakehurst, N.J., the organization responsible for designing, building, prototyping and testing most of the ALRE currently being used on carriers.

Lakehurst dispatched personnel to investigate the problem. A team of engineers, mechanics and quality assurance representatives disassembled the pendant engine's retractable sheaves. After tests and further research, an engineer discovered that one of Lakehurst's design specifications had not been met by the manufacturer. The variance adversely impacted the shock absorber function needed during an arrestment, which caused excessive cable tension and wear as well as unusual wear patterns on the other equipment. Later tests aboard *Truman* showed that replacing the non-spec part eliminated the problem.

Back on board *Truman*, the ABs are checking the arresting gear for the next landing, confident that fleet support units like Lakehurst will be there the next time something seems not quite right. And that kind of teamwork is the name of the Navy game. ✦

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Henry S. Truman (CVN 75) PAC



During sea trials aboard *Truman* (CVN 75), opposite, aviation boatswain's mates noticed a discrepancy involving the arresting cables, which led to the discovery of abnormal wear on the arresting gear pendant engines. Engineers from Naval Air Warfare Center Aircraft Division Lakehurst, N.J., diagnosed the problem and replaced a non-spec part on the retractable sheaves, above, allowing flight ops to continue normally.