Test kit to save Navy, Air Force, NASA $207 million

By CPO Robert Caperton, CPO Edwin Centracico, and CPO Jose Betancourt-Cantu
U.S. Naval Test Pilot School

By Donna Cipolloni
NAS Patuxent River Public Affairs

Northrop Grumman’s T-38 Talon, the world’s first supersonic jet trainer, has been a mainstay in pilot training since the 1960s. The United States Naval Test Pilot School (USNTPS) is the Navy’s principal operator of the twin-engined Talon; its fleet of 10 aircraft flies an average of 1,100 hours per year, providing students with valuable experience evaluating transonic and supersonic flight characteristics. However, over the past 20 years the nation’s T-38 fleet has developed a chronic problem with inconsistent exhaust gas temperatures, or EGT.

Grounding T-38s to track down the source of high, low, erratic, and fluctuating EGT costs the Navy — as well as the U.S. Air Force and NASA, which also operate them — tens of millions of dollars every year. But what was the cause?

After much effort, two members of the USNTPS maintenance department, Mearland “Zeke” Rusaw and Lenny Epps, finally identified the culprit: a malfunctioning engine temperature controller called the T5 amp. The T5 amp works like a thermostat, keeping the engine’s exhaust temperature from getting too hot or cold. When it stops working — the technical term is “losing its null” — the amp has to be recalibrated, or re-nulled, which takes a crew of four mechanics eight man-hours each to remove and replace at a cost of around $14,500 apiece. Often, once a new T5 amp had been installed, the maintenance team would find that it, too, had lost its null, requiring yet another tear-down to replace it.

Rusaw, a 30-year DynCorp veteran with 18 years’ experience as an aircraft electrician and 12 years as an electronics technician, estimated that half of the T5samps that they were replacing were not faulty, they just needed to be re-nulled. And if a way could be found to re-null those amps while still in the airplane, then maintenance crews could not only save significant dollars every year, but the U.S. Navy could sidestep a potential impact on infrastructure and fleet operations.

“This year’s exercise involved a simulated storm that developed and intensified to hurricane strength striking the Gulf of Mexico and U.S. Atlantic Coast,” explained NAS Patuxent River’s Supervisory Emergency Management Specialist Pat Paulsen. “The training assessed Tropical Conditions of Readiness (TCORR), sortie, aircraft evacuation, personnel accountability, personnel evacuation, mission essential personnel, disaster preparedness, and response and recovery procedures.”

HURREX, the annual hurricane preparedness/disaster response and recovery exercise prepares personnel for potential impacts on infrastructure and fleet operations. Impacted by COVID-19 restrictions, the usual two-week exercise was condensed to one week as participants dealt with the resulting challenges.

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• When disaster happens, your family may not be together in one place, you may need to evacuate with only essentials, or you may need to survive on your own for a while before help arrives. Having an action plan and building a kit of emergency supplies can help your family get through it. Visit www.ready.navy.mil for detailed how-to information.

• The Navy Family Accountability and Assessment System (NFAAS) allows you to report your current location, update emergency personal contact information and request assistance, thereby helping Navy leadership and authorities to support you, to maintain military readiness and to preserve national security. Register now with NFAAS at https://navyfamily.navy.mil/

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For information specific to Southern Maryland, visit http://mde.maryland.gov and search “Hurricane and Tropical Storm Preparedness”

HURREX/Citadel Gale 2020, May 11-15

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The 2019 hurricane season produced 18 named storms, including six hurricanes of which three — Dorian, Humberto and Lorenzo — were in the “major” category, according to the National Oceanographic and Atmospheric Administration. It marked the fourth consecutive above-normal Atlantic season, and top hurricane forecasters from Colorado State University are predicting major activity again in 2020.

With the season’s onset approaching, the Navy is wrapping up HURREX/Citadel Gale 2020, its annual hurricane preparedness/disaster response and recovery exercise, conducted by Commander, U.S. Fleet Forces Command and Commander, Naval Installations Command.

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