New engine test Cell gives maintainers

by Senior Airman Aldric Borders
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With the addition of a new engine test cell, the last piece of the T56 Centralized Intermediate Repair Facility puzzle was put into place. A Dec. 22 ribbon-cutting ceremony officially opened up the 379th Expeditionary Maintenance Squadron CIRF.

Tech Sgt. Robert Moore, CIRF test cell section chief, explained how this final addition to the CIRF contributes to the overall mission at the 379th Air Expeditionary Wing.

Sergeant Moore said the new engine test cell makes it possible for all maintenance and repairs performed on T56 engines and propellers used by C-130 Hercules aircraft throughout the AOR, to be done right here at the 379th AEW.

While this might not seem like a big deal, all major repairs and testing had to be done at Ramstein Air Base, Germany, prior to the test cell opening here. This meant broken engines and propellers had to be loaded up, flown all the way to Europe, repaired and tested there, flown back to the 379th AEW in order to provide a positive flow of spare engines and props to the aircraft maintenance units.

"When we were required to send engines in need of repair to Ramstein AB, there was a lot of overhead involved in having to use several different cargo aircraft to haul engines and props back and forth," said Sergeant Moore. "With the CIRF located here, we not only free up a great deal of cargo space for these missions, but we also are returning spare engines and props to our flying units much faster."

The CIRF is called into action when flighline maintainers run into a problem beyond their expertise.

The flightline maintainers provide regular maintenance of the engines and fix routine problems. When the problems get beyond their scope, such as major module replacement, they bring the engines to the CIRF.

"The CIRF has all the necessary facilities and equipment required for this level of maintenance," said Sergeant Moore. "Having an engine test cell here, dramatically cuts down on the amount of time flightline maintainers have to wait to get their product back."

Master Sgt. Kevin Biggs, 379th EMXS propulsion flight NCOIC, said since the new engine test cell has gone into operation, an average of 17 days of shipping time has been cut away allowing engines to get back into service

Photos by Senior Airman Aldric Borders

Tech. Sgt. Robert Moore, Centralized Intermediate Repair Facility test cell section chief, looks at a T-56 engine used on C-130s before running tests on it at the newly built engine test cell facility.

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sooner.

"When you consider it costs $12,000 on average to ship one propeller and $10,000 to ship one engine, the money saving benefits of the new engine test cell are heard loud and clear as well," said Sergeant Biggs. "In fact, the addition of the new test cell will save the Air Force roughly $1 million dollars a year."

The new engine test cell is capable of running tests to check all the operating characteristics of the engine.

Additionally, things such as internal oil and air pressures and major component vibration levels can be evaluated and determined.

"We don't want there to be any problems with these internal pressures and vibration levels that could possibly lead to an in-flight emergency," said Sergeant Moore. "So that's why we go through the process of testing the engines after we repair them."

Testing C-130 engines and propellers with the new test cell is the only operation of its kind in the AOR.

The CIRF can have anywhere from eight to 10 engines and 10 to 15 propellers in the process of being repaired at any given time.

The new engine test cell took about two months to build and test after the test pad and facility were completed by the 379th Expeditionary Civil Engineer Squadron, said Sergeant Moore.

"Our AEF rotation was responsible for getting the test cell set up and testing it to make sure that it was completely functional," he said.

Getting the CIRF up and running involved a team effort.

"This was a tremendous team effort between the 379th Civil Engineer Squadron, 379th Contracting Squadron, 379th Maintenance Squadron and several other agencies to get the project up and running," said Capt. Jason Mitchell, maintenance operations officer.

The new building on the engine test cell site will be used to store tools and provide office space. The building will also be used to perform minor repairs on the engines and propellers in response to problems found during the engine runs, eliminating the need to take them all the way back to the shop to repair.

"During the next rotation, the 379th Propulsion Flight will double in size and the goal is to repair 10 engines and 20 propellers each month," said Lt. Col. Kurt Kulch, 379th EMXS commander."

"This test cell makes this goal possible and is a significant increase in maintenance capability for the AOR."