171 MAINTENANCE SQUADRON

MISSION

LINEAGE
171 Consolidated Aircraft Maintenance Squadron
Redesignated 171 Maintenance Squadron

STATIONS
Pittsburgh International Airport Air Reserve Station, Coraopolis, PA

ASSIGNMENTS
171 Maintenance Group

COMMANDERS
LTC Gary Williard
LTC William Lofink
LTC Donald Lanke
Maj John Wohleber
Maj Edward Ryan
Cpt James B. Cleland

HONORS
Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

MOTTO

NICKNAME

OPERATIONS

The first and foremost obstacle to overcome was to satisfy the total lack of base operating space for the KC-97. The base facilities, originally designed to support two single-engine fighter squadrons, were bursting at the seams. The Base Supply Warehouse was filled to the rafters with many items in outside storage. The Facility deficiencies had been identified to the NGB on a yearly basis but without funding action. Due to the previous threat of reduction of ANG units, the Bureau took the position that new construction at those bases would be a misuse of scarce construction money. One could hardly fuss with that logic; a strong case could now be made that mission success could only be attained by additional facilities. The Bureau did authorize construction authority for a large Nosedock and an Aerospace Ground Equipment Building to be completed as early as possible, which was still two years away.

With winter approaching, the maintenance guys were not looking forward to performing all maintenance tasks outdoors for the next two years. A portable engine stand was constructed by them which would provide protection from the elements but was without any provisions for heat.

Meanwhile, discussions centered around the subject of somehow fitting the 97 into the hangar. Removal of each wing tip was a possibility, but was disregarded because of the many man-hours required to remove and properly replace them since they were not designed for such maintenance practices and could cause safety-related complications later on. Finally, one or more (the actual number cannot be verified) of these deep-thinkers developed a scheme to literally rotate the aircraft into the hangar. Fortunately, the 97 was designed with a hinged vertical stabilizer which could easily be lowered to the horizontal position in a short time? allowing the high tail to enter the hangar opening. The theory called for the aircraft to be moved into a position facing into the hangar door opening, slightly off-set to the left of center. The next move was for the tug operator to slowly turn the aircraft to the left, backing the right wing and most of the aircraft inside the hangar. By repositioning the tug and executing several precise moves, the aircraft was fully inside the hangar, facing forward. Removal of the aircraft was accomplished by reversing the entry cycle. After the brainstorm was proven by this local research and development effort, lines were painted to assist in maintaining the proper track.

Only the most qualified airplane-movers took part in this ritual, which was performed with ut-most concern for safety. The minimum distance standards for towing operations could not be met. Neither could the aircraft be quickly removed from the hangar in case of an emergency. On balance, it was determined that the added quality of maintenance performed indoors, as compared to outside winter conditions, would more than offset the accident potential related to the unofficial moves. This activity was duplicated many times without incident until the new nosedock was completed. It is also a fair statement to say that the procedure never failed to draw a crowd.

Maintaining the KC-97 airframe and system was not particularly difficult for our highly-

experienced aircraft mechanics and specialists. The four R-4360 engines required constant adjustments and parts replacement. The engine shop troops seldom reached the point where they felt caught up with their engine build-up workload. The age, long service-life, and lack of adequate replacement parts all added up to a power plant barely meeting its design capability. Only the skill and cunning of the engine specialists brought the operational reliability to ANG standards. The two J-47 jet engines, being of the same vintage, were plagued with similar problems but to a lesser degree.

During the four and one-half years of 97 operation, many engine changes were required and every single engine change was made outdoors in all kinds of weather. The engine guys became quite skilled in this duty. On a cold, blustery day, a two-hour change was not uncommon. In fact, the engine shop guys must be set aside as having had the most demanding job within the maintenance complex. They met the challenge head-on and won. The aircrews are deeply indebted to this group for outstanding services rendered.

The second noteworthy improvement was one which takes place after each aircraft conversion, normally referred to as Air Guard maintenance. As the maintainers' knowledge and proficiency increased, the mechanical condition and outward appearance of the fleet improved with each phase inspection. No two aircraft flew the same when first assigned. After being subjected to better inspection, re-rigging the flight controls, repairing slip-shod maintenance performed in years past and applying common sense maintenance practices, assigned aircraft now have a similar feel, fully appreciated by the pilots. The most important product of the 171st CAMS is the reliability built into the machine by good maintenance. Deployed aircrews derive great satisfaction knowing they are operating reliable equipment, especially on a dark night in the middle of the Atlantic: definitely one of the strengths of the 171st.

USAF Unit Histories
Created: 12 Mar 2021
Updated:

Sources

Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.