

1501st MAINTENANCE GROUP

LINEAGE

STATIONS

Travis, CA, 1949

Travis AFB, CA, 1 Jul 1955-18 Jan 1963

ASSIGNMENTS

COMMANDERS

HONORS

Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

EMBLEM SIGNIFICANCE

MOTTO

NICKNAME

OPERATIONS

Steve Brown was an R-4360 engine mechanic with the 1501st Maintenance Group (MG). His first assignment was to the flightline where: "I enlisted in the USAF in late May 1957. I spent 4 wks at Lackland, and then Aircraft Reciprocating Engine School at Sheppard AFB, Wichita Falls, TX. Jets would have been my first choice by far, either airframe or engines. Anyway our instructors

told us the Recip School was a lot harder because the engines were more complex. At Sheppard we worked on R-1820's (B-17 leftovers) a little on R-3350s (B-29 leftovers) and did run up R-2000 (C-54) engines in some test cells. Of my engine class we split about 50/50 to Travis and Dover, Del. My first active duty work was in the 1501 Flightline Maintenance Squadron doing Postflight inspections on C-97A and C-97C. We looked for loose connections, leaks, and fixed the minor maintenance squawks on the R-4360-65 engines.

Travis was a big operation. The 1501 Maint Group was composed of the 1501 Flightline Maintenance Squadron, 1501 Periodic Maintenance Squadron and 1501 Field Maintenance Squadron. FLMS did Post Flight and Pre-Flight & Turn Arounds, PMS did the hourly inspections in their "docks" (early wooden creatures), soon replaced with better facilities. I think the hourly interval was 300 hr inspections. Planes were in the hangar about 3 days and FMS had all the specialty shops. I got transferred to FMS after about 9 months to 1 year. My first reaction on going to FMS was a little cool because I liked where I was. That soon changed as I made friends and a bunch of the guys had all been through Sheppard at about the same time.

FMS had at least six shops: Instruments, Propellers, Fabrication, Aero Shop (flight controls), hydraulic shop and engine shop. The engine work was done in a big building, P-16. There were three engines in P-16 in the "EBU" Engine Build-up, R-4360-20WA for C-124AS, R-4360-63A for C-124C's, and R-4360-65 for C-97A and C-97C. EBU was one shop and about 2/3 civilian, engine change was another section. About 1959 there was some reorganization. An Engine Conditioning Section was established. Engine conditioning's goal was to increase the TBO [Time Between Overhaul] of the engines. Vibration analysis equipment was used. A vibration pickup was fastened to each cylinder and a harness connected the whole thing to an oscilloscope box. Engines were started and run up to about cruise power briefly to get patterns and see if any abnormal patterns showed up. As I recall, some of the cowling and baffling was removed. Engines tended to heat up so you had to move right along, but not a big problem. The patterns of valve opening and closing, spark plug firing, could be observed and problem cylinders or magnetos out of time could be retimed. We had cylinder change crews also. An engine change could be done in 6-8 hours, cylinders varied depending on location, top side and front row were easiest, a rear bottom ... location was difficult. 60 weight oil was black and made it hard to see everything and lighting wasn't always the best. Some special tools were required.

I made earlier reference to the EBU. The overhauled engines in the Blue or OD [olive drab] cans needed a lot of work before allowing an engine change. All our power-plants were put into a "QEC" Quick Engine Change configuration. The engine mount system was bolted to the raw engine, then to a mobile engine stand. This went through several work stations in a production line arrangement. Things that had to be added: carburetor, oil coolers, turbosupercharger (R-4360-65 only), cowl flaps, exhaust system, fuel air manifolds, generator or alternators, fuel flow meter, some instrumenta-tion. It was about a 4 - 5 day process with 1 - 3 workers. Then these were brought out to the "Test Beds". I worked here for my final assignment. The QEC was transferred from the Engine Stand to the Test Bed via a fork-lift with a boom and cables. This was often done in Engine Change on the Flight Line Maintenance Area. In the hangars, we had a overhead crane. The QEC's weight was about 6,000 lbs. Once we had the QEC mounted on the Test Bed, throttle, fuel, oil, instrument connections were made and propeller installed. This was about 1 hour job. A brief run to 800 -1000 rpm was made. This on half set of spark plugs to blow out the pickling

fluids in the cylinders. Yeah, it was a little messy and Test Bed got quite a few washings. With the rest of the plugs installed, the rest of the baffles and the complete cowling, we were ready to see if the engine would deliver its advertised power. Power was measured in T.O.P., Torque Oil Pressure at takeoff rpm and 60" manifold pressure max. Temperature was a factor, of course. Travis was 58' above sea level. Hot dry summer, cool, and sometimes very wet winters. I can't remember for sure where the engines were overhauled, but I am pretty sure it was SAAMA [San Antonio Air Material Area], Kelly AFB—maybe a few from SMAMA McClellan AFB. Some were also overhauled at civilian plants. One was Aerodex in Miami, Fl. Engines passed 98% of time. A marginal engine was done early in the morning before it got too hot (OAT) [Outside Air Temperature]. In 1960 most of the engines I saw had been thru overhaul 6, 7, 8, 9 times as evidenced by the stamping on the nose case by the Depot. All the P&W Eagles (brass) had been removed. I got one from a buddy in EBU."

Air Force Order of Battle

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Sources