

THE HISTORY OF

ARMY AIR FORCE PILOT SCHOOL (BASIC)

CHICO ARMY AIR FIELD

CHICO, CALIFORNIA

P.R.C.

THIRD INSTALLMENT

DECLASSIFIED
EO 11652

Period Covering

JANUARY 1, 1943 to JANUARY 1, 1944

Historical Officer

Walter L. Pearson, Captain, A.C.

Assistant Historical Officer

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MUSCAT 010753

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Each Flight had an aircraft inspector whose sole duty was to inspect the work performed by the flight crews to insure high quality, and the airworthiness of aircraft. Each crew in the flight was in charge of an aircraft crew chief who was responsible as lead mechanic for the inspection, maintenance, and servicing of each aircraft assigned him. The rank and file of personnel were designated as aircraft and engine mechanics to perform the 1st echelon work which included cleaning, adjusting, and making minor repairs to lubrication, ignition, carburation, fuel injection and other systems of the aircraft, not requiring disassembly.

The personnel assigned to 1st echelon maintenance work had decreased from 315 to 201 enlisted men by December 31, 1943.

The Production Line Maintenance Section of the Department of Aircraft Maintenance did the 2nd echelon maintenance and repairs which normally included all 50 hour inspections and always included all 100 hour inspections. This work was accomplished by moving the aircraft to be serviced through a production line with specialized crews performing certain designated maintenance and repair operations.

Before the airplanes entered the inspection line, the engine cowl was removed by the uncowling crew and an inspector made a thorough check for fuel and oil leaks. ¹⁰⁹ If any were found, appropriate remarks were noted on a receiving inspection form which followed each ship to the point where the needed repairs were accomplished. After this first inspection, the

¹⁰⁹ See Appendix IV-51

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airplane was taken to the wash crew and given a thorough washing.¹¹⁰ Colored soldiers from the 52nd Aviation Squadron did this work. The airplane then moved into either one of two inspection lines in the Production Line Maintenance Hangar.¹¹¹ Both lines were identical in operation.

During the first part of the year, there were 4 stations in each line, with a crew assigned to each station. Certain specific operations were performed at these stations. Station #1 took care of all maintenance work on wheels, brakes, tail gear, spark plugs and cylinder defleasures. Station #2 inspected and made the necessary repairs on the ignition and electrical system and the engine. Station #3 checked the valves, fuel and oil systems. Station #4 checked flight controls, cables, surfaces, skin and structures.¹¹² While these 4 stations were the pivot points of the production line, many other jobs were done on each plane as it moved along the line. Upon entering the hangar an uncowling crew removed fuselage side panels, inspection doors, and fairings. They used pneumatic screwdrivers to speed up this work. Sheet metal workers moved from station to station repairing defects on assemblies that could be repaired without removal from the plane. Propellers were checked by a specialized crew, radios and instruments were also inspected. As the airplane left the line it was inspected by a Production Line Maintenance Inspector. Any additional defects were referred to a special correction crew for appropriate action.

¹¹⁰ See Appendix IV-52
¹¹¹ See Appendix IV-53
¹¹² See Appendix IV-54

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As soon as inspections were completed and the airplane cleared for flight, the cowling crew replaced the engine and fuselage cowling and moved the airplane out to the parking apron where it was given a run-up test. If this test was satisfactory, the ship was released to the flying line. If the airplane was not satisfactory for flight because of engine malfunction, it was sent to the Engine Change Hangar also known as the Replacement Hangar, located just north of the Production Line Hangar.¹¹³

The Engine Change Hangar handled all engine changes as a cooperating subsidiary of PLM. It also did most of the trouble shooting required between the 50 and 100 hour checks, and accomplished other 2nd echelon maintenance work required by Technical Order Compliance.

If an airplane was rejected for flight because of serious defects other than engine difficulties, it was referred to the 19th Sub Dept for 3rd or 4th echelon repairs as needed.

Production Line Maintenance had really only swung into full operation at the beginning of 1943. On January 1st it was still doing its work in the open air on the parking apron. Soon after that, however, it moved into the still uncompleted Production Line Maintenance Hangar. This building was so constructed that all offices, supply rooms, and heavy repair equipment were placed in a center section throughout the length of the building, leaving a cleared line on either side through which the airplanes could be moved and worked upon, under cover. The Engine Change Hangar was not available for use until the following month.

¹¹³See Appendix I-2

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During the early part of 1943 there was a shortage of airplanes in the field. To keep the maximum number of planes available during flying hours, Production Line Maintenance operated during the night hours. A plane could normally be completely serviced through the line in 5½ hours. Operations were switched to daytime hours in April, but on October 1st it became necessary to go on a 24 hour day with two shifts. Crews were worked at staggered hours enabling the department to process the maximum number of planes during the 24 hour period and still keep a maximum number available for flying.

The change in June, incorporating all 1st and 2nd echelon maintenance work under one department head, made no material difference in the operation of production line maintenance and the engine change unit. This change in organization was principally of benefit in coordinating the first and second echelon work.

In August some changes took place which increased the efficiency of the production line. The assignment of work for each station was changed so that Stations #1 and #3 serviced the airplane and accessories and Stations #2 and #4 serviced the engine. In that way the station crews were so distributed that congestion was eliminated and processing was speeded up approximately 15%. As part of this speed up program, the inspections were made upon completion of the work at each station instead of at the end of the line. In addition, the Post Technical Inspector who had previously checked all airplanes processed, now checked only those which had not been through the line within the previous 30 days. This reduced the

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inspections approximately 50%.

Another step in the streamlining of the department was the creation of a Planning Department in September. This department under the direction of S/Sgt. C. F. Fox requisitioned parts for grounded aircraft, initiating work requests to Sub Depot, and coordinating with Sub Depot Supply in ordering parts for Technical Order Compliance. In addition, S/Sgt. Fox invented many repair saving devices such as a short stroke hacksaw to use for splitting bolt holes in the BT-13 landing gear boss. This tool made it possible to comply with a Technical Order which otherwise would have required the removal of the landing gear and saved 4 to 5 hours work. He also invented a reliable low pressure safety valve for use in the cleaning fluid system.

On November 20, 1943, a Technical Order Compliance crew joined the ranks of Production Line Maintenance. Its specific job was to comply with the various Technical Orders applying to the plans being processed on the inspection lines. This crew usually picked out a plane in each line and followed it through the line working the Technical Order of Compliance to completion without interfering with the routine maintenance work being accomplished on the line. This crew was in charge of S/Sgt. Hilde.

At the end of the year, SMO R. H. Harvey was in charge of the line having relieved Lt. Colonel G. W. Carrels on March 22, 1943. He had as his assistant WOJG H. H. Rose. The engine replacement unit had been in charge of WOJG S. C. Frost until December 28th when he was relieved by

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1st Lt. Sterling E. Owen. The Replacement Manager Chief was M/Sgt. B. E. Tressell.
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All 1st and 2nd echelon repair of instruments which consisted principally of trouble shooting and the making of minor repairs to complete the instruments in operation, was accomplished under a separate instrument section with S/Sgt. Eberhard B. Steinlage in charge. This section consisted of 31 men of whom 7 were assigned to work in the Production Line Maintenance Department. By the end of the year the assigned enlisted men had been reduced to 19 as the result of increased efficiency.

The maintenance of communications equipment on the aircraft was also handled by a special section originally in charge of 1st Lt. Melvin J. Mueller but subsequently made the responsibility of 1st Lt. Harris A. Stone
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the Base Communications Officer, on December 4, 1943. This section was responsible for the maintenance of the radio and interphone equipment at all times, including pre-flighting of the equipment every morning to see that it was in good operating condition and that it was adjusted to the correct frequency for the day's flying. It was also responsible for the removal of the radio and phone equipment from the aircraft going through the Production Line Maintenance Department. At this time, the equipment was thoroughly checked, cleaned, and adjusted, and worn or defective parts were replaced. The total enlisted men assigned increased from 35 on June 24th to 38 on December 30th due to the increase in the number of aircraft serviced.

114 Special Order #326, December 4, 1943, Chico Army Air Field

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A special Technical Transport and Transient Aircraft Crew was also maintained originally in charge of 1st Lt. Mueller and later in charge of 2nd Lt. Johnston. It was the responsibility of technical transport to have fuel and oil available to all aircraft whenever and wherever it was needed. It operated 4 tractors and 9 trailers as well as oil dispensers and other equipment in connection with this service. The transient aircraft crew operated under 2/Sgt. John Seibert who was also in charge of the Technical Transport Section. It was the responsibility of the Transient Aircraft Crew to service and maintain all transient aircraft and all aircraft assigned to Post Operations. The actual duties of the mechanics assigned were the same as those on the flight line, doing 1st echelon work but was more technical because of the fact that maintenance work was being done on various advanced types of aircraft. Twenty-eight enlisted men were assigned to this section in June. The personnel had increased to 35 by the end of the year.

The Air Corps Technical Supply Section in charge of PMSG John D. Sergeant was divided into the following subsections: PLM Technical Supply, Replacement Hangar Supply, Sub Supply and Tool Room. The PLM Technical Supply originated all work orders and initiated all requisitioning for a stock replacement serving Flights 2, 3, and Production Line Maintenance. The Replacement Hangar Supply stocked special equipment in tools for the operations of the Engine Change Department in this hangar and furnished small items of supply most frequently required. The Sub Supply was operated for the convenience of Flight 1 and also maintained a limited stock

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of parts as well as small hand and special tools. The Tool Room issued and maintained all records of tools and equipment for the entire flight line. The entire section had 20 enlisted men assigned at the time of activation. The personnel had been increased to 25 enlisted men at the end of the year.

The entire department of aircraft maintenance had an assigned strength of 644 enlisted men in June. On December 31st this had decreased to 555 enlisted men. Assigned aircraft had meanwhile increased from 191 to 258 during the same period.

This was the best indication of the efficiency of the new organization and new methods of operation as compared to those that had existed when the school was first moved to Chico in 1942. It should not be assumed, however, that the Director of Maintenance operated during 1943 without difficulties. Many experienced officers and Non-Commissioned officers were lost by transfer and there was a definite shortage of mechanics. During 1942 many mechanics had been trained on the field in an Air Mechanics School that had been established in June of that year. Several hundred enlisted men received their primary education in mechanics at that school which at times had so many students that it operated on a 24 hour a day basis and had approximately 40 instructors using the old municipal hangar at the north end of the field as a work shop, and a day-room type building as a display room for various types of equipment. This school

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was discontinued, however, at the beginning of February 1943. As the result the Aircraft Maintenance Department had no trained personnel in reserve for replacements.

During the fall of 1943 it was necessary to comb the field for inexperienced personnel with mechanical aptitude. Approximately 45 men were secured in this manner and given 4 weeks training consisting of 2 weeks of lectures and 2 weeks of practice on the job. At the end of that time, 25 men were retained as having satisfactory potentialities and the rest were returned to their organizations and reassigned. This attempt to secure additional mechanics had not been particularly successful. ¹¹⁶

COMMANDING OFFICER, 19TH SUB DEPOT

Major Walter D. Olson was Commanding Officer of the 19th Sub Depot at the beginning of the year and was relieved on January 19th by Captain Hugh J. Marth who had formerly served as Engineering Officer. Lt. E. E. Coullahan became Engineering Officer and served in that capacity until relieved by 1st Lt. Roland E. Reed on October 27th.

At that time there were 346 civilians employed in the Sub Depot with a staff of 5 officers including Captain George A. Russell as Supply Officer. During the year the Sub Depot added the function of supplying and maintaining Army Air Forces Signal equipment which consisted of radio equipment used in aircraft. Sub Depot did 3rd and 4th echelon work only.

It completed 28,280 work orders on instruments, accessory parts and minor repairs. It also completed 3rd echelon repairs on 220 aircraft of ¹¹⁶Interview with Captain W. F. Cowan, February 25, 1944; S/Sgt. Paul P. Eiebsch, March 8, 1944; CWO R. W. Harvey, January 7, 1944

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