40th Bomb Group Association

MEMORIES

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Editor's Introduction: Perhaps the single largest-scale goof-up of the entire B-29 effort was the C-109 Project in which converted B-24s were used to ferry gasoline from India to the forward area in China. Bud Etherington, who, as a Flight Engineer in the C-109 Project, has written this account of his experiences. The whole story cannot be told in one issue of MEMORIES. Accordingly, the story is being broken up into at least two parts.

Even in this carefully researched account, Bud does not tell the full story of the personal misery crew members from the 40th experienced during this tour with the C-109s. The idiocy of the commanding officer is only partly told. In the interests of sweet Christian charity, his name is not given in this narrative. Norman Larson, who served in the C-109s, described the CO as an "extremely young, extremely inexperienced and extremely eager West Pointer. He didn't try to be a bully boy, but came through with this phony I'm just one of the boys' attitude. We quickly found out that he didn't give a damn about the lives of the crew members."

Beyond serving under this idiot colonel, there were other personal agonies. Men who had built loyalties to the B-29 and to friends in their squadrons were jerked out of the Group and dumped into the C-109 Project. Mail, personal belongings and other anchors to reality were tossed aside in the interest of providing bodies to fly the converted B-24s.

Norm Larson and Harry Changnon have contributed important additional insights into the C-109 debacle. Their material will be included in subsequent issues of MEMORIES.

THE C-109 FIASCO

One of the interesting and untold stories about the XX Bomber Command activities in the early stages of the B-29 operations deals with the C-109 Provisional Unit. I had the misfortune to be assigned to this unit. Through the grace of God I somehow survived it. Following is the story of this unfortunate group plus a few personal recollections of events in which I was involved.

THE MISSION: During the late summer and early autumn of 1944, the XX Bomber Command faced a number of serious problems. While much improved, the B-29 engines were still not reliable. Overheating and frequent engine failure limited the effectiveness of the only B-29s in combat. The advance bases in China were being subjected to increased bombing by the Japanese who were also advancing closer to these bases. But one of the most limiting factors to the steady bombing of Japanese targets in China, Manchuria, Formosa and the Japanese mainland itself was the lack of gasoline supplies at our forward area bases.

Most of the flight time logged by the B-29s was the result of efforts to haul gasoline to the forward area. While a few of the original combat planes had been converted to tanker aircraft, the bulk of the fuel delivered to China was taken there in the combat planes themselves. The Air Transport Command could help but only a little as they were more than busy hauling other types of material and trying to keep General Stillwell and others supplied.

For each B-29 flying a combat mission from the advanced bases in China, about six gas-hauling flights from India to China by the combat B-29s was required. This not only took the planes away from their primary mission, the bombing of Japanese targets, but also used up precious engine hours, which as previously mentioned, was of serious concern. Actually the combat aircraft were taken out of this cargo service from time to time to save and prepare them for combat missions.

The magnitude of this problem can be expressed in several ways. A secret letter on June 27, 1944 from the 58th Bomb Wing set a goal of 157,250 gallons of fuel to be delivered to the advance bases in China for each of the four B-29 Groups in the period from June 20 to July 31, 1944. This anticipated five trips per month per tanker aircraft unloading an average of 2000 gallons per trip, and four trips per month per non-tanker aircraft unloading an average of 850 gallons per trip. However, about the middle of July the combat aircraft were taken off the cargo missions to prepare them for combat missions. The 40th Bomb Group, for example, delivered only 137,000 gallons of gasoline in July by 52 trips by combat aircraft and 15 trips by tankers. Fortunately in this period the average payload delivered exceeded the above anticipated offload as the tankers averaged 2246 gallons delivered per trip and the combat planes delivered 1203 gallons per trip on average. To do this the average takeoff weight of the fully loaded planes was about 131,000 pounds or 11,000 pounds above the maximum design weight of the B-29.

While this may seem like an abundance of gasoline, in truth it was very meager when the amount of fuel required to fly a mission out of China is considered. For example, the average takeoff fuel load per plane for Mission #9 to Anshan was 7173 gallons. On the October 25th mission to Omura each plane left with an average of 7251 gallons. If, for instance, each Group sent out only 20 planes on such a mission, 145,000 gallons of gasoline per Group would be required at the forward bases, plus enough to get the planes back to the bases in India.

To quote from the History of the Forward Echelon Detachment, XX Bomber Command, "The activities of this (Supply) Section during September were on an increasing scale with two maximum missions being run. The first mission which required 604,536 gallons of gasoline for servicing involved only fifteen truckloads of surface hauling (moving gasoline from one of the forward bases to another by tank truck). This was a new peak, but the second mission requiring 555,277 gallons...etc."

And to get that amount of gasoline to China in the first place was an unbelievably expensive and time-consuming operation. To quote from B-29 Superfortress by John Pimlott, "Even on a good day it took two gallons of fuel burned by the delivery aircraft to transport one gallon of fuel to Chengtu. On a bad day with head winds and diversions to avoid bad weather over the Himalayas, this could rise to twelve gallons for every one delivered." Unfortunately there were many bad days.

The need for additional gasoline deliveries to the forward bases in China was obvious.

THE AIRPLANE: The C-109 was basically a B-24 which had been converted to a tanker aircraft. All of the armament and other combat equipment had been removed. The wings on this version were nearly full of fuel cells, including the so-called Tokyo tanks. The nose section which normally carried the Bombardier and Navigator had been completely changed and a large fuel tank installed there. Another fuel cell was also situated inside the plane to the rear near the wing. All of the planes carried bomb-bay tanks. The wiring to the bomb shackles on which these tanks hung had been cut and the tanks wired in such a way that under even the most drastic emergency conditions, the bomb-bay tanks could not be salvoed. However, in spite of this, the Commanding Officer repeatedly insisted that the planes be flown fully loaded. Although this resulted in an extremely overloaded and unsafe condition, the crews were still forced to fly the planes this way under threat of court-martial.

While the B-24 was a well-proven and reliable aircraft, the addition of all of these fuel cells filled with gasoline resulted in a gross overload of about 9,000 pounds above the accepted maximum takeoff weight of the aircraft, or fifteen to twenty percent above the plane's design weight. (Later on when the Air Transport Command took over the C-109 operation, the gross takeoff weight was restricted to 61,000 pounds, and ATC did not fly these aircraft until the bomb-bay tanks we've fixed so that they could be salvoed.) To take off from Kalaikunda at this weight meant that takeoff was preferable before the sun was up and the temperature started, it's inevitable rapid rise. Even under the best of conditions, takeoff at this weight was always a gamble. All available power was necessary to get up enough speed to become airborne and the plane was so heavy that its response to the controls was very sluggish. Once takeoff was accomplished the usual pattern was to fly at a few hundred feet about the trees for a couple of hours. By then enough fuel would have been consumed so that the plane would climb somewhat better. The inability to salvo the bomb bay tanks in case of trouble (as described elsewhere) unquestionably caused the unnecessary deaths of several crews.

Some of the fuel tanks were improperly vented. A flight from Kalaikunda to one of the China bases was often a 1200-mile event of breathing 100 octane gas fumes. It seemed that nowhere in the plane were you really free of the fumes in concentration although they varied from one plane to another. But the worst part of this came upon landing. The venting of the nose tanks was such that when the wheels touched down upon landing, 100 octane gasoline poured from the nose tank vent covering the entire windshield for about three seconds or so, and completely obstructing visibility at a most crucial time. In addition to the obvious fire hazard there was an extra strong dose of fumes as the reward for having landed safely.

Some seventy B-24-J aircraft were modified in the States to the C-109 configuration. Fully loaded these aircraft carried 4900 gallons of gasoline. By the end of September only about thirty of these aircraft had arrived in Kalaikunda. However, the unfortunate large loss of crews and planes due to the extreme overloaded takeoff requirement, and other factors, significantly reduced the number of aircraft available to accomplish the gas hauling mission.

THE C-109 PROVISIONAL UNIT: The C-109 Provisional Unit, also known as the C-109 Provisional Group, was created by the XX Bomber Command to supplement the gas-hauling capabilities of the four Groups and the assigned Air Transport support squadrons. It was based at an old British fighter base in Kalaikunda, India, northwest of Calcutta and only a few miles from the XX Bomber Command Headquarters in Kharagapur. This base was also known as B-2. The diary of the Base Commander at B-2 states "XX Bomber Command made every effort for Air Transport Command to operate and maintain these aircraft in their system, however, the Headquarters Army Air Forces directed that this was the full responsibility of the XX Bomber Command, and with no additional personnel allocated to this project."

Starting early in September, crews from all four of the B-29 Groups were selected by some unknown process and sent to B-2 on detached service to survive if they could the rigors of the C-109 Provisional Unit. How or why a particular crew was chosen was never explained nor understood, but many of the men felt that the personal likes or dislikes of the Squadron Commander played a big part. The normal flight crew for a C-109 was five men--pilot, co-pilot, flight engineer, navigator and radio operator. Most of the original B-29 combat crew gunners were also trained as aircraft mechanics and those that were transferred to C-109s were put to work immediately on maintenance. Unfortunately, very few of them were familiar with the B-24s and the quality of maintenance suffered during their learning period. The month of September was a disaster in many respects.

Two Air Transport Command C-46 Squadrons had been operating from B-2 since May and June 1944. The base facilities were fairly well able to handle them, but the influx of the C-109 Provisional Unit and the supporting Service Group created some real problems such as housing, messing, transportation, aircraft parking aprons and taxiways, maintenance equipment and tools, latrines, etc. At one point there were only three spark plug wrenches available for thirty C-109 aircraft. To further quote the Base Commander's Diary "Water could be used only during certain periods. The two 30-gallon pumps could not possibly supply sufficient water for a post strength of 2400 during extremely hot weather. The failure of the lights at night was the rule and not the exception. The food was often uneatable." Many of the maintenance and service people lived in tents, although most of the officers on the flight crews and some of the enlisted men were in rather open barracks.

The Commanding Officer of the C-109 Provisional Unit was a Colonel. He was the sorriest excuse for a man that I have ever or will ever have had the misfortune to meet. It was our understanding that he was a reject from the Training Command and was aggravated at having received this assignment instead of a combat command. There was no doubt that he took his frustration out on the men. He was going to show the brass how good a job he could do and he didn't care how many of us lost our lives making a hero out of him. He did not care about the seriously overloaded condition of the aircraft, the non-dropable bomb-bay tanks, the inadequate maintenance (in fact he contributed to this), the improperly vented gas tanks, nor other safety considerations. He only cared that the crews do exactly as he ordered without regard to common sense, reason, or safety. All of this was under the constant threat of court-martial.

The greatest complaint by the flight crews had to do with the serious weight overload at which we were expected to fly the C-109s. In spite of the inability to salvo the bomb-bay tanks we were ordered to fly fully loaded or be court-martialed. The CO did finally consent to looking into the matter of fixing the bomb-bay tanks so they could be salvoed. At least four men were authorized to visit other nearby bases to look for parts with which to modify the bomb-bay tank racks, but unfortunately most of them were poorly qualified. To the best of my knowledge the CO never made any serious effort to resolve this problem nor to give it any sort of priority. He never assigned qualified engineering people (who were available) to this effort and to my knowledge, as long as the C-109 Provisional Unit existed, not a single plane was modified so that these tanks could be dropped. After the Unit was disbanded and the Air Transport Command took over the operation of these aircraft, this problem was quickly resolved as they would not fly the planes in such an unsafe condition nor at such a large overload as we were forced to do. The 9000 pound overweight referred to above was found in documents at the Air Force Historical Records Center. I had remembered it as a much higher figure, and I still believe it was. Various personal correspondence tends to confirm a higher overload figure.

The maintenance operation was set up as a "production line" system. A plane would enter at one end of the line and come out at the other end allegedly ready to fly. This often, of course, was not the case. The Cargo Service Unit which was set up to handle the non-operations activities had the maintenance responsibilities. The line was staffed primarily by the dual-rated B-29 gunners, some native labor, whose primary capability seemed to be to wash oil off of the cowling, and some men from the four B-29 Groups' service sections, who, like the flight crews, were there on detached service. This sort of maintenance setup precluded a given individual from being responsible for any given aircraft. The B-29 flight crews were accustomed to having a competent crew chief responsible for their airplane, and the original crews of the Group had even done the bulk of their own maintenance. Therefore, the crews had a certain confidence that their B-29 was safe to fly when they released the brakes and pushed the throttles forward.

Such a confidence could not exist under this C-109 maintenance scheme. To make matters worse, the lack of familiarity with the C-109 systems on the part of the B-29 crew members/mechanics was a real concern. They represented about 90% of the maintenance force. However, worst of all was the constant pressure by the Commanding Officer for the maintenance line to release aircraft for flight duty, whether or not it was ready. In spite of existing regulations, much critical engine and other work was neglected on his orders. Hence, many times the aircraft coming off the maintenance line were really unfit to fly. Even so, the average number of aircraft in commission in the month of October was only 16.8 or 70% of the aircraft assigned.

The insisted-upon maximum takeoff load necessitated that the maximum amount of engine power be available for a successful takeoff. The crews, already concerned about the overloaded condition and the inability to salvo the bomb-bay tanks, quickly recognized the inadequacy of the maintenance program as another major problem. And it wasn't only engines, but brakes, tires, electrical and hydraulic systems, and almost everything else that at one time or another might be neglected or improperly fixed under order of the Commanding Officer or otherwise. The Commanding Officer's response to the crews' complaints was additional threats of court-martial.

Unfortunately, the fears of the flight crews were well founded. In one ten-day period in September, thirteen planes were lost. A number of lives could have been saved if the Commanding Officer would have allowed less than full-load takeoffs, aggressively pursued the probably relatively simple steps necessary to salvo the bomb-bay tanks and require engine inspections and changes in accordance with the existing regulations.

There was another unrelated but very serious problem as well. During this time period, an apparently unusual weather pattern had moved in over the advanced bases in China. Most of the time a thick cloud cover extended over the entire Chengtu area. As I recall it, it was not unusual to enter the clouds somewhere well above 15,000 feet and finally break out somewhere below 800 feet and with limited visibility at that. It was not unusual for the forward area fields to be closed for many hours at a time. More than one crew was forced to bail out after having run out of fuel after many hours in the air. Several others crashed attempting to work their way down to the base in this terrible weather and with the limited approach facilities available.

The procedure for flight assignments was somewhat flexible. Normally you flew with your own crew, but on many occasions an individual would have to fill in with another crew because of illness (diarrhea was rampant) or some other problem on the part of the crew member whom you were replacing. Normally one crew would fly the plane to China, and another crew, which had flown up on a previous plane, would fly it back. However, this was not always the case. This meant that at times you might wait several days for another C-109 to show up so that you could get back to India. All crews flew into all four of the advance China bases. The method by which these trips were scheduled was never understood.

As can be imagined, the morale of the flight crews was very low. In the first place we were upset at being assigned away from our B-29 Group, its action and our friends. Why had we been chosen for this? Had we been abandoned by our old Group? While this was supposedly only a temporary assignment, we wondered if we were really out of the main B-29 program for good. Living conditions were poor, which didn't help. And, of course the overloaded planes with their inadequate maintenance, the high number of crashes and the resulting high casualty rate, and our sadistic Commanding Officer constantly threatening us with court-martial had us all hating this assignment.

During the month of October a very serious problem of another nature developed which had nothing to do with the problems of the flight crews. Suddenly water began appearing in the gasoline from the pipeline. Again quoting from the Base Commander's Diary, "About the tenth of the second month of operation, water began to appear in the gasoline from the pipeline in great quantities. Eight (8) C-109 tankers ready for takeoff had to be drained entirely (4900 gallons each). All ships were then routed to other fields for servicing. The District Engineer and XX Bomber Command Engineer worked for more than a week on this difficulty. Large traps, finally installed, seemed to be separating the water fairly well. During this water trouble period, only one C-109 was lost. Several were en route over the Hump when the water was first discovered and all were warned by radio."

The continuing problem of overweight takeoffs coupled with inadequate inspection of the overstressed engines, etc. did actually take its toll. At least four pilots refused to fly in spite of the court-martial threats. Three of these eventually changed their minds, but certain of the court-martial charges were dropped by the Commanding Officer.

There were several other assignments given to some of the crew members when they were not flying. For example, one of the navigators reports of being "given the job of bending aluminum tubing using a plumbers tool to a 90 degree angle without any wrinkles. This we could hardly ever do as about 75% or more came out with wrinkles on the inside bend. These were thrown away. The purpose was to use these attached to rubber tubing and connect all tanks so that all tanks could be drained from one spigot. I do not know if this job was ever finished." The idea here was to improve the gasoline off-loading operation. Initially many of the tanks had to be unloaded individually which was very time consuming. With the new system supposedly all tanks could be quickly unloaded from a single point. But because the Commanding Officer assigned untrained people to do this instead of qualified people with mechanical training, 75% of the effort and material was wasted.

Occasionally, one of the navigators would fly in a C-46 or C-47 with one of the Air Transport Command Squadrons based at Kalaikunda. To quote one of these navigators, "It was almost a relief to fly in one of them rather than the C-109."

The C-109 Provisional Unit flew 103 departures from B-2 during the month of September 1944 and delivered 136,576 gallons of gasoline to the forward bases in China. In October the Unit flew 190 trips over the Hump and delivered 285,217 gallons of gasoline to the forward area.

At the end of October 1944 the C-109 Provisional Unit, which had been in operation for only two months ceased to exist as we had known it. The Group with the remaining thirty-two C-109 aircraft was transferred to the India-China Division of the Air Transport Command in Assam, and many of the B-29 flight crews were returned to their combat units. A few of the crews who had been most recently assigned to the C-109 Provisional Unit flew with the Air Transport Command for a few weeks before returning to their B-29 Group.

When the C-109 Provisional Unit as we knew it ceased to exist, it was still without an Organization Equipment List or Table of Equipment Authorization. Actually the Adjutant General authority to activate a unit for the operation of the seventy C-109 aircraft had never been received, according to the Base Commander's Diary.

REFERENCES

1. XX Bomber Command History

2. XX Bomber Command, History for September 1944
History Forward Echelon Detachment

3. B-29 SUPERFORTRESS by John Pimlott
Bison Books Ltd. - 1980

4. Diary of Col. L.L. Sailor, Base Commander, Kalaikunda Army Air Field (B-2)

5. Private correspondence - H.C. Changnon, 1-10-80

6. Headquarters, Army Air Field B-2, Office of the Statistical Officer –
30 September 1944

7. Headquarters, Army Air Field B-2, Office of the Statistical Officer –
4 November 1944

8. Headquarters, Forward Echelon Detachment, 40th Bomb Group, Detachment History –
1 October 1944 to 31 October 1944

Editor's Postscript:

This issue of MEMORIES departs from the usual format in that it documents an historical episode of the 40th's experience rather than describing some personal experience as seen through the eyes of the participant. It is felt that the C-109 story has to be told this way in order to get on the record, in some way, the details of this fiasco as they really happened. It would not be told in this way if official histories were depended upon. The morale-grinding experience of individuals who flew the C-109s will be covered in an upcoming issue of MEMORIES.

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