

OL' SHAKEY

MEMORIES
OF A FLIGHT ENGINEER

BYRON GENE FISH

The opinions expressed in this manuscript are solely the opinions of the author and do not represent the opinions or thoughts of the publisher. The author has represented and warranted full ownership and/or legal right to publish all the materials in this book.

OI' Shakey
Memories of a Flight Engineer
All Rights Reserved.
Copyright © 2013 Byron Gene Fish
v2.0

Cover Photo of Douglas C-124 © United States Air Force. All rights reserved - used with permission.
Additional Cover Images © 2013 JupiterImages Corporation. All rights reserved - used with permission.

This book may not be reproduced, transmitted, or stored in whole or in part by any means, including graphic, electronic, or mechanical without the express written consent of the publisher except in the case of brief quotations embodied in critical articles and reviews.

Outskirts Press, Inc.
<http://www.outskirtspress.com>

ISBN: 978-1-4787-1690-7

Outskirts Press and the "OP" logo are trademarks belonging to Outskirts Press, Inc.

PRINTED IN THE UNITED STATES OF AMERICA

Dedication

This book is dedicated to all those flight crew members with whom I had the privilege and honor of flying. The pilots who were, for the most part, completely professional in all aspects of flight, who were able to take this ungainly giant into the air – and more importantly – get her back on the ground safely and efficiently. The navigators who, in spite of the jokes we told about them, were always able to answer the question, “Where are we, nav?” with calm assurance. To the loadmasters who usually arrived at the airplane before anyone else and often left long after everyone else had finished dinner at the club, who manhandled small and large cargo loads into a position which assured optimal flight performance, and who provided valuable assistance with the mounds of paperwork generated by the flight.

And, since most of the stories in this book relate various aspects of the flight engineers who kept the airplane and all of its systems running smoothly, a particular thanks to you all.

Special thanks must go to my wife, Rosaly, and my many friends for their encouragement for me to put some of my stories into print. Thank you all!

Contents

| | |
|---------------------|------|
| Abbreviations | vii |
| Foreword | ix |
| Preface | xi |
| Introduction | xiii |

STATESIDE OPERATIONS

| | |
|--|----|
| Flight Engineer Preflight Basics..... | 1 |
| Transition Training at Tinker | 14 |
| Flying the 309 | 20 |
| Sunday Church Flight..... | 33 |
| The Crawlway | 41 |
| Yellow Hissing Bomb | 48 |
| Marines Need Steel Plates..... | 57 |
| Formation Flying | 62 |
| Kite Flying at Pope Air Force Base | 69 |
| Batman and Robin | 77 |
| Flight Check | 83 |

PACIFIC OPERATIONS

| | |
|-----------------------------|-----|
| Commissary Shopping | 89 |
| No Help Needed | 93 |
| Midway Island Layover | 101 |

| | |
|---|-----|
| Life with the Wake Island Stage | 106 |
| Tet Offensive, 1968 | 113 |
| In-flight “Emergencies” | 120 |
| Lost on Course – Well Sorta | 127 |
| Tachikawa..... | 134 |
| We Flew the Bob Hope Christmas Tour – Almost..... | 139 |
| Strawberry Shortcake | 143 |
| Whiskey John..... | 146 |
| Propeller Overspeed | 154 |

EUROPE AND MIDDLE EAST OPERATIONS

| | |
|----------------------------------|-----|
| TDY to Rhein-Main, Germany | 169 |
| The Road Grader | 173 |
| DNIF at Athens..... | 176 |
| Engine Trouble at Teheran | 181 |
| Bodo, Norway..... | 190 |

DOWN-RANGE OPERATIONS

| | |
|---|-----|
| Flying Down Range | 203 |
| Santo Domingo, Dominican Republic | 206 |
| Joe Feeds the Troops..... | 216 |
| Paramaribo, Suriname | 221 |
| Fritz Lost His Panel Truck..... | 228 |
| Recife, Brazil | 232 |
| Wide Awake at Ascension..... | 238 |
| Leopoldville or Kinshasa | 241 |

NORTH OPERATIONS

| | |
|-----------------------------|-----|
| Surprise Flying North | 251 |
|-----------------------------|-----|

APPENDICES

| | |
|-------------------------------------|-----|
| Appendix A – They Came Before | 263 |
| Appendix B | 275 |
| Appendix C – Photographs..... | 281 |

Abbreviations

| | |
|--------------------------|-------------------------------------|
| 1 st Lt | First Lieutenant |
| 2 nd Lt | Second Lieutenant |
| A1C..... | Airman First Class |
| A2C..... | Airman Second Class |
| AC..... | Aircraft Commander |
| AC/IP..... | Aircraft Commander/Instructor Pilot |
| AC/FE | Aircraft Commander/Flight Examiner |
| ACP | Airlift Command Post |
| Acft | Aircraft |
| Capt..... | Captain |
| Col..... | Colonel |
| CP | Copilot |
| FE | Flight Engineer |
| IFE..... | Instructor Flight Engineer |
| FE/FE..... | Flight Examiner/Flight Engineer |
| FE/LM..... | Flight Examiner/Loadmaster |
| ILM..... | Instructor Loadmaster |
| ILS | Instrument Landing System |
| LM..... | Loadmaster |
| LtCol..... | Lieutenant Colonel |
| TOP | Torque Oil Pressure |
| Maj..... | Major |
| MAP | Manifold Absolute Pressure |
| NDB or ADF..... | A Navigation Radio Beacon |
| RPM..... | Revolutions per Minute |
| VOR..... | Another Navigation Beacon |

Foreword

From the earliest of times man has wanted to fly. He studied birds in flight and tried to emulate the mechanical flapping of their wings with no success – and often with disastrous results.

Many innovators were working on the problems of flight, but then along came the Wright brothers from Ohio. Since Wilbur and Orville first figured out how to get an engine-powered flying machine into the air for a sustained period, men and women have had an overwhelming desire to fly. They wanted to go faster, higher, farther. In the early days of aviation, everyone who wished could go out to his barn and put together his own special breed of machine – some very successful, some total catastrophes.

Almost immediately the military services around the world saw the possibilities of employing the air machines in defensive and offensive roles. But with the military there needed to be order; some sort of regulation – or standard – to what an airplane, or aeroplane as it was called in those days, should look like, how it should function, how well and for how long and how fast it should fly. These requirements were laid down in various invitations to the public to bid on a flying machine capable of meeting these requirements.

One of the first public requests for bid issued by the U.S. Army Signal Corps, the arm which had originally been given responsibility for Army Aviation, is in Appendix B.

It is evident that even in the earliest days of military aviation, the forward thinkers had definite ideas of what a military airplane should be able to accomplish. As airplane generations progressed, so did the requirements being specified. The airplanes had to fly faster, farther,

higher, and carry ever heavier payloads. With experience, military procurement officers were learning they could demand higher and higher performance from the airplanes, whether they were fighters, bombers, reconnaissance, or cargo/troop carriers. The manufacturers' engineers continued to dream up ever better designs, often surpassing procurement requirements.

Preface

Memories are a wonderful thing, but can evolve and warp with time. These stories were written from notes in the author's flight engineer's flight log, and reflect the times to the best of his recollection. Every one of these stories happened, but the names of some of the players have been changed for protection of the guilty – and sometimes the innocent.

Although flight operations involving several million parts of an old airplane temporarily flying in close formation is very serious business, the flight crews tried to lighten the stresses both in the air and on the ground. Stress was always riding with them because of the nature of their cargo loads going to Viet Nam – and coming home. An attempt was made to steer away from the more morbid aspects of these missions and concentrate on the lighter side.

Introduction

A group of pilots were sitting around a break room during a semi-annual training session playing what we commonly called a game of “First Liar Doesn’t Have a Chance.” This is sometimes referred to as “hanger talk,” or just “storytelling.”

One of our group had been an Army Special Forces sergeant during the Viet Nam conflict, and he had told of his days in jump school at Fort Benning, Georgia, and later with the 82nd Airborne division at Fort Bragg, North Carolina.

I responded by relating one of the stories contained in this book, the story of Batman and Robin. His response was that I should write a book about those experiences. The seed was planted and I began thinking about what should – and more importantly – what could be included. After several false starts I settled on the tales contained herein.

Some of these stories have already seen publication in magazines, so if on the off chance you have seen any of them before, I apologize.

For those of you who have not seen any of them but have heard their telling, I apologize to you, too.

For everyone, I thank you for purchasing this book, and hope you enjoy reading about Ol’ Shakey and some of the flight crews who flew her on local training flights, short missions, and those long missions that could last for several days.

STATESIDE OPERATIONS



Flight Engineer Preflight Basics



Flight Engineer Wings

Through the mid-fifties to early sixties, slipping into a flight deck crew position was one of the most difficult undertakings for the Air Force enlisted man. This was especially true since many old-timers from WWII and Korea were happy to sit out as many years as the Air Force would allow, collect their flight pay, and fly only when absolutely necessary. But in the spring of 1964, America began its big buildup in Southeast Asia. Remember that, the unpleasantness in Viet Nam? Suddenly an urgent need existed for flight engineers, loadmasters, and aerial gunners.

Military Air Transport Service, or MATS, moved cargo and people, and needed more flight crews to support the mission; thus a worldwide call went out seeking volunteers. Everyone who possessed the necessary skills, passed the screening tests – and applied – was directed to report for training at one of the operational bases scattered around the United States assigned to one of the Numbered Air Forces: the 21st Air Force on the East Coast, the 22nd Air Force on the West Coast.

MATS bases in the 21st AF were Charleston AFB, South Carolina, McGuire AFB, New Jersey, Dover AFB, Delaware, and Robbins AFB, Georgia. The 22nd AF had Travis AFB, California, and McChord AFB, Washington. There were also several aerial

terminals scattered throughout the United States, but all flight crews were assigned to one of the six main bases.

MATS squadrons in the 1960s flew Douglas C-133 Cargomaster, Lockheed C-130 Hercules, and Douglas C-124 Globemaster II. The C-130 and C-133 were powered by turbopropeller engines; the C-124, "Ol' Shakey," boasted the largest aircraft reciprocating engine ever built.

The C-124 was the oldest and least glamorous of them all, and dated back to 1949. Unlike the C-133 and C-130, the C-124 was not pressurized. For this reason, typical missions were flown at nine thousand feet in "Indian country" most of the time. Indian country is that altitude where the light airplanes, such as the Piper Comanche, Cherokee, Apache, Aztec, and others could be found. Higher altitudes were possible, but the crew was required to wear oxygen masks above 10,000 feet, and no one enjoyed sucking oxygen through a tube!

In 1962 some genius at Air Force personnel decided there was no need for 1,500 fully qualified pilots, navigators, and various ground officers. I was caught up in the massive reduction in force (RIF). Given the choice of leaving and becoming a civilian, or remaining in the Air Force in the enlisted grades, I chose to remain in. Because of my earlier training in maintenance, I was assigned as a Production Scheduler at Laughlin AFB.

Laughlin AFB was a pilot-training base located near Del Rio, Texas. The squadron to which I was assigned, like most of the other squadrons on the base, was commanded by a second lieutenant who had been eliminated from the pilot-training program, and was awaiting assignment to a suitable ground job.

One day in early January 1964, three other former pilots and I reported to the commander. We were shown a TWX (a military telegram) from the Army describing an urgent need for many additional helicopter pilots. The Army was soliciting and accepting applications for the program from civilian pilots and from former

AF pilots. We were assured that the Air Force would release any former pilots who applied for the Army program.

We four eagerly took the TWX and the next day drove to Fort Sam Houston in San Antonio for the interview. An Army major discussed the needs of the Army, and the opportunities available. His pitch sounded too good to be true. We would be sent to Fort Rucker in Alabama for helicopter training before joining an operational unit. But, he assured us, because we had all been rated in the AF, we would not have any trouble with the program, and we would immediately be reinstated into our former AF commissioned grade. We were required to hand-carry all of the necessary paperwork to our squadron commander for his approval. Only then would we begin the process of changing services. We left San Antonio for the return trip to Del Rio in high spirits. We were going to once again be officers – and be flying. Life was good!

When I arrived at our rented house in Del Rio, I discussed with my wife the possible move to the Army. She was all for it. Being the wife of an Air Force staff sergeant did not have the same appeal that being the wife of an Army captain had. She was enthusiastic.

Later that evening we tuned in to the Walter Cronkite news program. The background pictures showed helicopters in all states of disrepair, some just jumbled masses of rubble! The scene moved to a flight line in some place called Saigon, where a crew was busy loading flag-covered coffins into a C-124 for the final ride back home. “Uncle Walter” was talking about the growing conflict, and the deaths of many of the “advisors” who had been sent to Viet Nam to oversee the buildup of the South Vietnamese army. Unarmed helicopters were regularly being shot down and the crews and passengers killed by an insurgent force from the north, who were determined to take over all of Viet Nam.

My wife and I watched for a few minutes, and then we both said, almost at the same time, “Cannon fodder!”

It is almost universally accepted that behind every warrior is a good woman, one who is willing to share her man's dreams, goals, and, in this case, insanity. My wife did not display this spirit and immediately put her foot down and declared, "No way are you going over there and leave me here with the kids!" With a finger waving toward me she declared, "You just forget about going off to fly for the Army!"

Her extremely negative attitude increased every day until she went to an Air Force doctor with her concerns. I was called to the medical clinic the next day and counseled about my responsibilities to my family, and the importance of providing a positive support to her mental condition. I resigned myself to the proposition that my quest to become an Army aviator had ended. But by no means had my desire to get back into a flying job been diminished. The upcoming war just might be the ticket to the flight deck – or cockpit – whichever proved available. I filed the application for Army aviation in one of my desk drawers; one never knows what the future may bring.

Later in the spring, the call went out from Military Air Transport Service (MATS) that new flight engineer applicants were needed for the buildup taking place in Viet Nam. After discussing this possibility with my wife and convincing her that being in MATS would not be as dangerous as being in Viet Nam for a year at a time, she agreed. I immediately applied for the flight engineer program, not caring which airplane or base I would be assigned to, only that I would be back flying.

I was given an endless series of written examinations, and two physical examinations. Then I waited. After what seemed forever, but was in reality only three weeks, I was notified of my selection.

The news quickly traveled around the base, and several of the old-timers in my squadron cautioned, "Performance flight engineer school is really rough. Don't be too disappointed when you wash out of the academics. You'll probably bust out, it happened to me!"

I was not deterred – my enthusiasm for flying had never faded.

A few days before I left my office for the last time, one of my subordinates, Airman First Class Leon J. Jones, a young, very intelligent black man from Mississippi, walked in. He looked slightly uncomfortable.

“What’s up, Jonsey?” I asked.

“You know that I’m a private pilot, right?” he responded.

“Sure.”

“Well, I’ve been thinking. Maybe that Army aviation program could be an opportunity for me. What do you think?” he asked.

“You bet,” I replied. “But you do know a lot of those guys are getting killed over in Viet Nam, don’t you?”

“Yeah,” he said, “but this may be the only way I can get into flying.”

“Are you sure about this; you really want to apply?”

“Yeah, I’m sure. Can I have a day off to go over to Fort Sam and get an application?”

“I can go you one better,” I replied as I opened the lower drawer on the right side of my desk. “I’ve got an application right here. Let’s fill it out and take it over to the old man.”

The “old man,” our Second Lieutenant Squadron Commander, did not accept the application with a great deal of eagerness, but after grumbling a little he signed it with a favorable endorsement. Airman Jones had put himself into the pipeline to become an Army helicopter pilot. I wished him all the luck in the world, convinced that we’d never meet again.

Wrong again, Gene!

With high spirits and a determination to succeed, I left Laughlin AFB and Del Rio, Texas, for Charleston, South Carolina. I had the eagerness of anyone destined for flying duty.

Two new fledgling flight engineer wannabes, Larry Brewster and I, arrived at Charleston Air Force Base, South Carolina, on that

cold blustery day in late March. We were met at the 1608th Military Air Transport Wing headquarters by a young, shiny-faced, real-live flight engineer, complete with the wings to prove it!

“Welcome to MATS and the 17th Military Air Transport Squadron,” he said as he offered each of us his handshake. “You’re gonna like the 17th and flying Ol’ Shakey. And besides, we need the help.” He smiled and we followed him out to the parking lot and the squadron panel truck for the ride to our new home.

Both the other aspirant and I had been hoping to be assigned to either the 41st or 76th squadrons flying the C-130 because it was a newer airplane. But then we became resigned to our fate; any flying position beat working on the ground in the Air Force.

A few minutes later we arrived at the squadron and were ushered into the chief flight engineer’s office, and introduced to the men who would control our lives for the next several years. A large, neatly hand-printed sign was on the wall behind the grizzled old chief:

**When in this office speak in a low, soothing voice
Avoid any manifestations of disagreement,
For when I Perceive loud noise or disagreement
I develop a Serious case of gastroenteritis and
I become MOST UNPLEASANT!**

I figured the sign said it all, and decided right there that I would do all in my power to not stir the bucket or make waves if at all possible.

The other guy had been a mechanic and flying crew chief in Strategic Air Command, and smiled at those around us and said, “Hi, I’m Technical Sergeant Larry Brewster. You boys can relax now; SAC sent me out here to teach all you MATS pukes how to fly.”

Everything in the office stopped, not a sound could be heard as every eye turned toward these two newbies. The grizzled old Chief Master Sergeant Anderson, whom everyone called “Blowby,” knitted

his eyebrows and turned toward Larry as he wrote something on a pad, then looked at me and growled, “You with him?”

“No, Chief,” I quickly replied. “I never met this man before!” No use starting off on the wrong foot.

“Probably not much point in becoming friends, either,” the chief mumbled in dismissal.

Check-in was several days of blurred memory. Another physical examination, much more in depth than the prescreening examinations at my old base; shots for every disease known to man, and some thought up by the MATS medical staff! They prodded and poked in places I didn’t even know were there! They seemed determined to find something – anything – wrong so they could prove they had done their jobs. But finally one of the doctors came into the examination room and declared we were both in relatively good health, and handed us the report of the physical examination, the “Flight Physical.”

We were administered more written examinations; given orientation lectures on the history of MATS, history of the 1608th Military Air Transport Wing and the 17th Military Air Transport Squadron; then finally, the history of the flight engineer career field. The days were endless, but not once had we been near the flight line to see an airplane. Oh, we saw airplanes daily, flying endless touch-and-go landings, or taking off for various exotic locations all over the globe. But we never saw one up close and personal!

Finally a class date was set for our formal training. We would begin on Monday, 16 April. At this rate, perhaps one day we would actually get near an airplane. Maybe even learn how to get inside, and if we were really lucky, maybe even be able to start the engines and take our places next to the other Air Force flight engineers.

Class 64-27 consisted of twenty students from the 3rd and 17th squadrons, both of which flew the C-124. The 41st and 76th were not represented, we learned, because the flight engineers assigned to fly the C-130 were not “performance qualified” flight engineers, a

distinction that I never really understood. We all did the same thing, but we had engine controls; the C-130 engineers had to share their controls with the pilots.

Performance engineer's school was not as difficult as I had been led to believe. The primary instructor had been a highly qualified high-flying-time flight engineer. About a year prior to our class date, he had failed his annual physical examination and was grounded. Rather than put him out to pasture, MATS used his talents to teach the craft to new men; he could perform on the ground, but just could not fly.

"Good morning, gentlemen. My name is Master Sergeant Dixon. Most flight engineers call me Grant. You people may call me 'Sergeant' for the time being." He let his gaze sweep around the twenty eager would-be flight engineers at tables in front of him, and obviously noted three of us had been pilots and two others had been navigators. "I see some of you come from previous flying duties. This work is different, yet it is the same. Nothing can come between you and the mission. You will be an integral part of a team. Don't ever forget that. Your job is no less important, nor no more important, than that of any other member of your crew."

The ancient engineer walked to each of us and offered his hand. "I'm here to make flight engineers out of you men, and I'll do my best. When you graduate – if you graduate – you will be awarded the title of performance-qualified flight engineer and be assigned a new Air Force specialty code that designates you as a primary flight crew member, a giant step above the basic flight engineer designation.

"This school is difficult, but not too difficult to pass if you apply yourselves. It's difficult because we don't want anyone getting the idea this job is easy. It isn't! But it has its rewards – if you get through. Look around right now. Some of you won't make it to the final examination. Some of you who take the final examination may not make it through to graduation. But that's not something anyone should be ashamed of." Sergeant Dixon glanced around the room

again; this time his gaze lingered on each of us for a few moments, letting the image burn into his memory. His thinning hair demanded a brush or comb, but he just wiped a large weathered hand across his head, forcing stray strands back into place – for a few moments.

No one spoke. It seemed to me that no one was even breathing – I know I wasn't. I was afraid I'd miss some word of wisdom if I cluttered my hearing with the sound of hissing air!

“What would be worse is if you made it through this school, got assigned to the line, and made a mistake that killed a bunch of people. I'm gonna do everything I can to prevent that from happening. If it ever gets too tough, if anyone ever wants out, just come see me and you'll be out. No questions asked, and no problems from the Air Force.” Then he smiled and came around again and greeted each of us by name, and wished us all good luck. Most impressive!

Physics, chemistry, and mathematics review took up the first two weeks of the class. We studied Boyle, Charles, Guy-Lussac, Bernoulli, conservation of energy, slide-rule operation (back then there were no handy electronic pocket calculators), airplane performance graphs and tables, the atmosphere, and smoe.

“Smoe?” you ask. Sounded like that little ghostly thing that used to be in the *Lil Abner* comic strip. But this *smoe* is a factor used by flight engineers to correct performance data for nonstandard atmospheric conditions, and is expressed as “the reciprocal of the square root of sigma.” I place this explanation here because of an incident that happened later during the class.

Calculating engine power for the 28-cylinder Pratt and Whitney R-4360-63A engine included looking up engine revolutions per minute (RPM), manifold absolute pressure (MAP), and torque oil pressure (TOP). Learning these skills consumed hours of instruction and practice. Determining takeoff and landing distance and speeds, flight plan fuel and time requirements, and weight and balance all contributed to sleepless nights. The most difficult part of the job as

a student was to arrive at the same answers the instructor had gotten from the performance graphs. The tolerance allowed was less than one percent error from the instructor's answer.

To get around the error problem, Sergeant Dixon advised us to make "smoe pickers."

"Everyone stop what you're doin'. We gotta talk about the accuracy you people are gettin'. It's nonexistent! Now, people, if you wanna get the same answers I do, and you better, ya gotta have a smoe picker."

"Aw, Sergeant," someone began to protest, "there's no such thing as..."

"A smoe picker?" Sergeant Dixon interrupted. "It's nothing but a needle pressed into a pencil eraser and a ten-power magnifying glass. With this instrument you'll be able to see your charts, which obviously none of you can now. Maybe you'll be able to find an exact position between the curves."

That afternoon there was a run at the exchange for needles and ten-power magnifying glasses. We members of the class built smoe pickers!

Then we began the next phase of instruction, determining the distance to takeoff along with takeoff acceleration time and distance. And a very interesting thing developed. Our answers began to be well within the tolerance Sergeant Dixon had set for us.

Then one fateful day Sergeant Dixon suggested we all take our afternoon break at the flight line snack bar, just across the street from the 1608th academic building. When we arrived, we all got coffee and settled into chairs at a table near two of the old and grizzled line-qualified flight engineers who were preparing for a flight. One was computing the takeoff and landing data card, commonly referred to as the TOLD card.

We watched as this "real flight engineer" opened his book of charts. He then ruined all of the good habits our instructors had

been trying to instill into us. As this real, live, line-qualified flight engineer took a bite of chili, he used the tip of his soup spoon to locate the takeoff acceleration point on the chart. That morning was the last time anyone in the class used a smoe picker. But we discovered something important; we had developed our chart-reading accuracy and could get correct answers without the crutch!

The days and weeks marched along with endless practice digging the gold out of the many charts we would live with for the next several years – if we successfully passed the course. It seemed too soon, but final examination day finally arrived almost without notice. As Sergeant Dixon had predicted on the first day of class twelve weeks earlier, there were ten fewer flight engineer candidates remaining. The attrition to the rigors of the academic phase was the highest for any enlisted career field. Four of the ten had voluntarily elected to leave; the other six had washed out with poor grades during the phase tests.

“Well, here we are. Looks like you people have gotten past the difficult stuff. From now on it’s all downhill easy!” Sergeant Dixon was standing in front of the class, his hands behind his back.

“This final exam,” he continued, “is a complete flight plan from departure to destination with a maximum weight air drop in the middle. Now, just to keep everyone honest, pass all of your notes, slide rules, and charts to the end of the table. I’ve got new slide rules and tables for the exam.”

A chorus of groans filled the room; all of our notes neatly printed on the various charts, the formulae scratched on our slide rules (at Sergeant Dixon’s urgings), and the familiarity of our own flight manuals – all to be lost!

Then Sergeant Dixon raised his hand, cutting off our protest. “Gentlemen, this is a timed test. You’ll begin when I say, and stop when I call time. You have six hours to complete the test. This should be enough time. You either know it now – or you don’t.” He paused to let the last sink in, and then continued.

“This test is not designed to be easy, but to give you a challenge such as you’ll experience when you become qualified flight engineers. I’ll answer specific queries on interpretation of individual questions, but I won’t help you or give you the answers.”

“Hey, Sergeant,” one of the men responded, “six hours seems like a long time to sit without a break.”

“If any of you little boys have to leave the room, go one at a time, but no more than five minutes out at a time. Are there any other comments or questions?”

No other comments or questions were raised. We began.

After about an hour Larry Brewster closed his test book and walked out of the room. Everyone glanced up, but then we continued with our own work. Sergeant Dixon noted Larry’s departure, and then went back to reading a technical bulletin. A few minutes later Larry returned and slumped into his chair.

The examination was, as Sergeant Dixon warned, testing all of the skills and knowledge he and the other instructors had been teaching. Everything about the test was practical. No theory, only application of the knowledge of airplane performance and aerodynamics we had gained.

Suddenly, Larry threw his slide rule against the wall, slammed his books closed, and stomped from the room. Sergeant Dixon and the rest of us gave little attention to this. When he again returned, Larry retrieved his slide rule, checked its calibration, and went back to his test.

A few minutes later he again flung the offending slide rule and test booklet against the wall. He then stomped out, muttering under his breath, “manifold pressure, huh!” over and over.

This time Sergeant Dixon picked up Larry’s books and slide rule, checked the calibration, and placed it back on the desk. Eventually Brewster came storming back into the room, anger in his eyes, a fight ready to erupt.

“Larry, you seem just a bit agitated,” Sergeant Dixon smiled.

“Agitated isn’t the right word. Angry is closer! Furious is better!”

“Gentlemen, take a break from the exam. The clock has stopped,” Sergeant Dixon said. “Let’s find out what’s troubling Larry.” We all sat up and turned our attention to our troubled classmate.

“What seems to be the trouble?” Sergeant Dixon asked.

“I know you said this would be a difficult test, Sergeant! I know the Air Force wants to weed out those who can’t hack it! I know all of these things, but you just tell me one thing!”

Grabbing his test booklet, Larry pushed it under Sergeant Dixon’s nose. “Just tell me how to get manifold pressure out of these charts. That’s all I want to know! You get manifold pressure from these charts and I’ll eat the whole thing!” Larry’s face had taken on a florid tint as his eyes shot fire toward our instructor.

Sergeant Dixon slowly opened the test booklet, began thumbing through the charts. “Where’d you get these charts?”

“You gave ’em to me!”

“Well, it’s obvious you can’t get manifold pressure from these charts. They’re for the C-130 and you’re gonna fly a C-124. Why’d you use them?”

Brewster persisted, “You gave ’em to me!”

Since Larry had been working for over three hours with charts from the wrong airplane, Sergeant Dixon, and the rest of us, decided to give him the correct answers up to where we were. Larry continued and passed the test using the proper charts.

Everyone who took the test passed. The class began with twenty members and now we were graduating with a fifty percent loss! This was a heavy loss rate, even for Air Force flight schools. We lost one of the former pilots and a former navigator, along with eight of the former mechanics and flight mechanics.

But there was little time to savor our accomplishment. We were needed to assist in the war buildup, and we were eager to get on with the flying phase of our training.