Chapter VII

THE SEPTEMBER 30, 1942, REVISION OF THE GLIDER PILOT TRAINING OBJECTIVE

Revision of Objective. While the Flying Training Command was endeavoring to effect the directive of August 10, Headquarters initiated the inevitable and greatly needed study to rectify the glider program. It was realized that the program was completely out of phase and that glider pilot production was far in excess of existing and contemplated tactical needs. The acute shortage of tow planes and the serious morale problem developing in the glider pools demanded an immediate and effective remedy.

On September 25, therefore, A-3 forwarded a memorandum to the Chief of the Air Staff which advocated a radical revision of the glider pilot training program. Recently, considerable discussion had occurred in Headquarters regarding the disposition of available Troop Carrier groups. This memorandum recommended that one group be permanently attached to the Flying Training Command for advanced glider pilot training immediately, and another group by November 1. A reduction of about 50 per cent in the glider pilot training objective was also recommended. Under the preceding directive, 7,800 pilots were to be produced by March 1, 1943. This number was now to be reduced to 4,000 by that date, and thereafter training was to continue at the rate of 400 a month to provide a total of 8,000 by December 31, 1943.[1]

Effectuation of New Objective. The memorandum was approved by the Chief of the Air Staff, and on September 30, 1942, the Director of Individual Training instructed the Flying Training Command to conduct the glider program accordingly.[2] The training centers were immediately directed to effect the new program.

All Preliminary Schools in the Southeast Training Center were to be closed as previously planned. This marked the discontinuation of training of Class B glider students.[3] In accordance with this decision and due to the fact that personnel necessary for the revised program were already on procurement, the Director of Individual Training advised the Civil Aeronautics Administration on October 6 that Class B procurement was to stop. It was requested that only two more classes of 540 elementary trainees each be supplied, December 4 and 18.[4] The Elementary Schools were to continue in operation at the rate of 816 students a class until all preliminary graduates including Civilian Pilot Trainees had been trained. Then, all Elementary Schools were to be closed.

The civil contract Basic Schools, two in each training center, were to continue at maximum capacity until all elementary graduates had been given basic training. The Army Basic School at Fort Sumner, New Mexico, and the recently activated Basic School at Starkville, Mississippi, were to be closed at the discretion of the West Coast and Southeast Training Centers. When all students now in the glider program had received basic training, which was expected to be around June, 1943, the basic course was to be increased to two months and was to be given at the six civil contract schools. Separate Elementary Schools were no longer to be employed. The training course would consist of one month of dead stick landings in light airplanes and one month in training gliders. The Advanced Schools were to continue operating at maximum capacity until all basic graduates had received training.[5]

Accumulation of Students in Pools. But the downward revision of the total objective, except by somewhat alleviating the materiel shortage, did not by any means solve the serious problems facing the Flying Training Command. The authorized decrease in student production rate, in fact, tended to aggravate the rapid accumulation of trainees in pools and prolong their prospective training period.

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1. Memo for C/AS by A-3, Sept. 25, 1942, in AAG 353.9 3A, Glider Training.
2. AFRIT to CG,AAFFTC, Sept. 30, 1942, in ibid.
3. CG,AAFFTC to CG's, TC's, Oct. 12, 1942, in AAG 360.01 B, Programs.
4. Daily Diary, AFRIT, Oct. 6, 1942.
5. CG,AAFFTC to CG's, TC's, Oct. 12, 1942, in AAG 360.01 B, Programs.

On October 17, 1942, there were approximately nineteen hundred students awaiting elementary training. It was believed, now that procurement by the Civil Aeronautics Administration had been discontinued, that this would be the maximum number to accumulate in this pool. By December 1 this pool should decrease to about twelve hundred trainees and be completely absorbed during the first month of 1943. About eight hundred students were awaiting the basic phase, and the pool would probably increase to about twenty-six hundred by February 1, 1943. After that time, a decrease was expected, with elimination by May, 1943. In October, 1942, there were already 1,600 students awaiting advanced training, and it was estimated that if more tow planes were not furnished, the number would increase to approximately five thousand by June, 1943.[6]

Changes in Personnel Procedures. As trainees were accumulating in the pools in such enormous numbers and as there were already enough on procurement to meet the existing glider pilot objective, during October the Flying Training Command initiated action to discontinue the acceptance of Class A glider pilot applicants. Headquarters concurred on the condition that all candidates having filed application but not yet assigned to training be accepted.[7] On November 16, 1942, an AAG letter announced the discontinuance of glider pilot procurement.[8]

On November 21, 1942, the status of glider pilots upon graduation was changed. Prior to this date, they had been rated as staff sergeants, but from now on all graduates were to be appointed flight officers in the Army of the United States.[9] Commissioned officers training in grade would continue in that grade upon graduation, while those aviation cadets who had voluntarily relinquished pilot training to enter the glider program would be commissioned second lieutenants. Future promotion to commissioned grades from flight officer grade would be according to the T/O strength of the actjvity to which the flight officer was assigned.[10] The basis for this change in procedure was the fact that glider pilot trainees were classified as aviation students, and under Section 3 of the Flight Officer Act the Secretary of War was authorized to prescribe regulations to make temporary appointments as flight officers from among men who received training as aviation students.[11]

Structural Failure of the Fifteen-place Glider. The Flying Training Command had intended to implement advanced training at Stuttgart, Arkansas, Lubbock, Texas, Dalhart, Texas, and Victorville, California, as soon as the CG-4A gliders arrived. These stations were staffed and prepared to begin training at once, but two bottlenecks developed. One of these was the lack of tow planes, and the other, the structural failure of the new fifteen-place gliders. Hardly had the new gliders been procured, then they were all grounded due "to failure in special fittings attaching tail brace wires to the tail surfaces." Action was immediately taken to have improved swivel fittings and tail wire assemblies made up at the factory and shipped to the Advanced Schools for installation. But the gliders were again grounded due to the failure of the new streamlined tail wires. Stranded cable was then installed, and all schools except Victorville began operations about the end of November. In spite of these difficulties, however, the first advanced class of thirty men graduated November 23, 1942, at Stuttgart.[12] It would seem that the structural failure of the CG-4A was perhaps another indication of an experimental program expanded too rapidly without sufficient testing of heretofore unused equipment.

Tow Plane and Glider Requirements. Despite this new revision of the glider pilot training objective, the materiel problem still remained unsolved. If the directive of 4,000 pilots by March 1, 1943, was to be met, the Flying Training Command required at least eighty-eight tow planes for advanced training immediately. These were requested October 3.[13]

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6. CG,AAFFTC to CG,AAF, Oct. 14, 1942, in AAG 353.9 3A, Glider Training.
7. Daily Diary, AFRIT, Oct. 30, 1942.
8. AAF 352, Nov. 16, 1942.
9. Daily Diary, AAFFTC, Nov. 21, 1942.
10. Ibid., Jan. 2, 1943.
11. Ibid., Sept. 17, 1942.
12. Project Book of the CG,AAFFTC.
13. 1st Indorsement (AG,AAFFTC to CG,AFAMC, Oct. 21, 1942), AFRIT to CG,AAFFTC, Oct. 22, 1942, in AAG 452.1, Gliders.

The Director of Individual Training concurred and requested A-3 to advance the date of arrival of the allotted second Troop Carrier group as soon as possible, especially in view of the fact that one squadron of the Troop Carrier group then attached to the Command was being removed for participation in the October airborne maneuvers in Texas.[14] A-3 replied that the requirements for these maneuvers precluded the assignment of the additional group prior to November.[15]

The second Troop Carrier group, the 63rd, did not arrive until the middle of November, some time after the scheduled date. The delay was caused by a sharp decline in factory production and the fact that many Troop Carrier aircraft had been shipped overseas unexpectedly for participation in combat operations.[16]

Again on November 13, 1942, the Director of Individual Training requested the Director of War Organization and Movement through the Director of Air Support to make the necessary tow planes and gliders available to the Flying Training Command. By this time the Command had found that under the objective of September 30, a continuous total of 114 CG-4A gliders, plus 3 per cent a month attrition, and an equal number of tow planes of C-47 or C-60 type were required. After May 1, 1943, it was estimated that the requirements would decrease to 103 gliders and an equal number of tow planes. By early November only ninety gliders had been allocated to the Flying Training Command, and as it was desired to open a fourth Advanced School at Victorville, California, as soon as possible, immediate allocation of an additional twenty-four CG-4A gliders was requested. Although the requisite tow squadrons had at last been assigned to the Flying Training Command, they were without their full complement of planes. Some of the squadrons had only nine planes instead of thirteen, and one squadron was without any planes at all.[17]

Coordination by the Director of Air Support was slow. On November 24 that office requested the Director of War Organization and Movement to assign the required twenty-four gliders, but added that the tow planes could not be allocated, for production of C-47 airplanes was not even sufficient to meet other commitments. Headquarters, however, cognizant of the acute tow plane needs of the Flying Training Command, had arranged for the allocation of fifty-two C-60 airplanes, plus 4 per cent attrition, the entire production through January, 1943, and thereafter allocation of 4 per cent attrition and an eight-plane maintenance reserve. It was hoped that at a later date additional C-60 aircraft might be allotted; however, Air Support was contemplating withdrawing one Troop Carrier squadron for every thirteen C-60's delivered for advanced training.[18]

On November 26 thirteen CG-4A gliders were made available by the Director of War Organization and Movement with the promise of eleven more as soon as they became ready for delivery.[19]

Obviously, the Flying Training Command could not meet the glider training objective with the number of tow planes on hand. Consequently, on November 24 it submitted a revised flow chart showing the amount of training that might be reasonably expected with the Troop Carrier airplanes then attached to the Command. It was requested that this new estimate be made the basis for further revision of the glider pilot training program if additional tow planes could not be assigned.[20] Once again, the necessity of integrating available materiel and pilot production indicated the need for further reduction of the glider pilot objective.

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14. R&R No. 3, AFRIT to AFACT, Oct. 11, 1942, in AAG 353.9 C, Glider Training.
15. R&R No. 4, AFACT to AFRIT, Oct. 12, 1942, in ibid.
16. CG,AFTCC to CG,AAFFTC, Nov. 3, 1942, to AAFFTC Files.
17. R&R, AFRIT to AFROM through Director of Air Support, Nov. 13, 1942, in AAG 452.1, Gliders. (Director of Air Support hereinafter cited as AFRAS).
18. R&R No. 2, AFRAS to AFROM, Nov. 24, 1942, in ibid.
19. R&R No. 3, AFROM to AFRIT, Nov. 26, 1942, in ibid.
20. CG,AAFFTC to CG,AAF, Nov. 24, 1942, in AAG 353 A, Glider Training.

Summary. During the two months' authority of the revision of September 30, 1942, the results of too large original production objectives and their attendant problems became increasingly evident. Reduction of pilot training quotas and the growing amassment of students in pools resulted in the suspension of both Class A and Class B enlistment. Tow plane and glider requirements were not yet being met. In the training program, the problems of this period centered in the conduct of advanced training. Aside from the acute shortage of tow planes, training was also hindered by the structural failure of the CG-4A glider. One major policy change occurred, the decision to appoint glider pilot graduates to flight officer grade.

Chapter VIII

THE DECEMBER 1, 1942, REVISION OF THE GLIDER PILOT TRAINING OBJECTIVE

Objective Halved. The responsible agencies in Headquarters were at last becoming cognizant of the difficulties attendant to the accomplishment of the glider program. The Flying Training Command's recommendations of November 24 were promptly translated into action, for on December 1, 1942, the Command was informed that the glider pilot objective had been substantially reduced. The graduation rate was now to be brought into conformity with the fifteen-place gliders and tow planes available in the Flying Training Command. Specifically, glider pilots were to be produced at the rate of 300 every two weeks for a grand total of 8,335. This would provide 2,035 by March 1, 1943, approximately one-half of the number required by the directive of September 30, 1942.[1]

With this new objective, consonance was at last achieved, in theory if not in fact, between available materiel and student production quotas. Each Advanced School was to graduate seventy-five students every two weeks. When tow plans were diverted for ferrying purposes, a reduction of four graduates for each airplane was authorized.[2]

Revision of Advanced Training. Suddenly, on December 21, 1942, the Flying Training Command was instructed by Headquarters to reduce the advanced training program from fifteen to eight hours.[3] It would appear that this directive was arbitrarily promulgated without proper consultation of those men fully grounded in the needs and methods of glider training. Examination of the program of instruction published January 15, 1943 as a guide for the new course reveals that the time provided for flying training was entirely inadequate.

The duration of the new advanced training course was established at four weeks of ground school and two or four weeks of flight training at the discretion of the director of training. Six hours were to be devoted to day transition, three dual and three solo, and two hours to night flying, one dual and one solo. This accounted for the total eight hours of prescribed pilot time. To supplement this curtailed instruction, seven additional hours of co-pilot and passenger time were also allotted. "The ratio of dual to solo hours was purposely left low," and "except in unusual circumstances," it was prescribed that "students requiring more than four hours dual should be eliminated." Due to the reduction in flight time, all students were to be given a three-day course on all phases of heavy glider flying prior to their first day of actual flying.[4]

It was felt throughout the entire Flying Training Command that a candidate could not learn to fly a CG-4A glider efficiently in eight hours. Advanced schools were forced to graduate men who were not fully qualified glider pilots, and during the two months that this directive was in effect, dissatisfaction and disillusionment were rife among the instructor personnel.

The reduction in the advanced glider course and the necessity for redistributing the two Troop Carrier groups conducting towing operations required a change in glider production quotas. The Gulf Coast and Southeast Training Centers were instructed to produce 100 graduates every two weeks beginning December 24 at each of their three schools, while Victorville in the West Coast Training Center was charged with the graduation of 300 students every two weeks.[5]

Tow Plane Requirements. The tow plane problem was still not solved. By December, however, 129 C-60A aircraft had been allocated to the Flying Training Command, 79 as tow ships and 50 as navigational trainers. By the fifth of December twenty-

1. Daily Diary, AFRIT, Dec. 1, 1942.
2. AG,AAFFTC to CG's, TC's, Dec. 8, 1942, in AAFFTC Files.
3. Daily Diary, AFRIT, Dec. 21, 1942.
4. FTC Memorandum, No. 50-1-1, Feb. 1, 1943.
5. TE6G, CG,AAFFTC to CG's, TC's, Dec. 17, 1942, in AAFFTC Files.

three of these planes had been delivered, and twenty more were scheduled for delivery by the end of the month. These planes, however, had not been modified for towing purposes. In view of this the Materiel Command recommended that all C-60A aircraft delivered to date and those soon to be delivered, to the extent of fifty, be converted to navigational trainers. As C-60A's furnished with towing equipment were scheduled to come off the production lines in January, the first seventy-nine of these were to be allotted to advanced glider training. But as each thirteen of these new planes arrived at glider training establishments, one squadron of C-47's or C-53's now being used for conducting training would be returned to the Troop Carrier Command. This recommendation was concurred in by the Directorates of Individual Training and Air Support.[6] Consequently, in January the Flying Training Command instructed the training centers to make the necessary arrangements to enable pilot personnel at the Advanced Glider Schools to take over the towing operations as soon as the C-60 planes were delivered. Glider tow pilots and maintenance personnel worked with the Troop Carrier personnel in order to achieve maximum training.[7]

Surplus of Training Gliders. The reduction in the glider program now caused a surplus of converted cub type gliders, and the Flying Training Command was faced with an acute storage problem. Accordingly, the Materiel Command was advised through Individual Training that a total of 512 was all that would be necessary instead of the allotted 750. The Materiel Command stated that fabrication was already underway on these gliders, but that an attempt would be made to allocate the excess 238 to the Navy for its glider program.[8] For the first time the perpetual materiel problem had executed a complete turnabout: downward revision of the glider objective had caused a surplus of materiel.

Fifteen-place Glider Requirements. Delivery of the 114 CG-4A gliders allotted to the Flying Training Command was almost complete by the end of 1942. Experience in advanced training, however, had demonstrated that this number was not sufficient to meet training directives, and, consequently, forty-four more were requested on December 27. The need for more gliders was due in part "to materiel failures of tail sections and landing gears resulting in grounding of all CG-4A gliders for long periods of time."[9]

Maintenance of Fifteen-place Glider. The materiel failure of the CG-4A glider was another serious barrier to the Flying Training Command's effort to accomplish the advanced glider training program. For example, on November 22, 1942, approximately 60 per cent of the gliders were grounded "due to tail wheel trouble and especially to a required change in the brace wires of the tail surfaces." The Director of Individual Training, in an effort to alleviate this serious situation, on November 23 requested the Air Service Command "that a determination be made as to the priority of glider repairs in sub-depots and that correspondingly corrective action be directed."[10]

The maintenance problem, however, did not improve. The advanced training stations were finding "that it was very difficult to find anyone in the Air Service Command who would assume responsibility for the Glider Program."[11] Actually, in September the Glider Unit, Aircraft Section, Maintenance Division had been activated in the Air Service Command. This unit was composed of personnel "thoroughly trained and familiar with the maintenance procedure of service activities as well as the design and construction of all gliders used by the Air Corps," and was delegated to handle all maintenance and engineering problems rela-

6. R&R No. 2, AFRIT to AFAMC through AFRAS, Dec.7, 1942, in AAG 452.1, Gliders.
7. Asst. AG,AAFFTC to CG's, TC's Jan. 2, 1943, in AAFFTC Files.
8. Daily Diary, AFRIT, Dec. 12, 1942.
9. AG,AAFFTC to AFROM through AFRIT, Dec. 27, 1942, in AAG 452.1, Gliders.
10. R&R, AFRIT to AFASC, Nov. 23, 1942, in ibid.
11. R&R, Deputy Chief of the Air Staff to AFASC, Dec. 18, 1942, in ibid. (Deputy Chief of the Air Staff hereinafter cited as AFDAS).

CG-4A combat glider. Glider carries thirteen fully equipped troops, glider pilot, and copilot.

Combat glider can also carry jeep and six men. In transit four men sit in the jeep.

Tactical take-off gear is jettisoned after leaving the ground. Landing is accomplished on wooden skids.

The CG-4A glider has a wing span of 83 feet and an over-all length of 48 feet. Its gross weight is 6,800 pounds, and it carries a useful load of 3,711 pounds. Its maximum indicated air speed is 120 miles an hour. The nose containing the pilot's compartment lifts on hinges to allow the glider to be loaded with a jeep, 37 mm anti-tank gun, 75 mm pack howitzer, or a quarter ton trailer.

tive to gliders.[12] The institution of technical orders and an inspection system for gliders had also been directed.[13] Finally, on December 26 the Materiel Command and the Air Service Command placed first priority on the maintenance of the CG-4A glider.[14]

In spite of the priority on maintenance, throughout January, February, and March at least 50 per cent of the gliders remained grounded. In December the Director of Individual Training had advised the Flying Training Command to request the Air Service Command to make mobile air depots available in order to expedite the necessary repairs. These mobile repair depots were requested, but this project was not deemed feasible by the Air Service Command.[15]

Frequent failure of the front landing gear fittings, the towline release mechanism, and the nose-raising locking device on the CG-4A glider caused the Director of Air Support to refer the problem to the Materiel Command for immediate remedy. The Materiel Division reported that no failure of the front landing gear had been encountered at Wright Field, and stated that

> It is believed that the failures encountered in service are entirely due to errors in landing technique on the part of the pilots. CG-4A gliders should not be landed in the three point attitude or should they be dropped in. Proper procedure consists of flying the glider onto the ground. It is also believed the use of training gliders as the TG-5 which requires a landing resembling an airplane landing rather than a glider landing is conducive in training pilots in improper technique. . . .

The Command expressed the opinion that the failures in the tow release mechanism was due to improper maintenance. "An indicator is provided to insure that the tow release mechanism is completely closed. During a tour of inspection many tow planes were found in which this indicator was inoperative due to having collected dirt and from lack of lubricant."[16] The same decision was reached in regard to the nose-raising locking device; failure was due to faulty maintenance, not faulty design.[17]

The maintenance problem of the CG-4A glider yet remains to be solved. As late as May, 1943, as many as 75 per cent of the gliders were grounded at one time.[18] But by this time the problem was actually not so acute, because the reduced training load and quantity production of cargo gliders relieved the situation. Perhaps the maintenance difficulty can be explained in part by the fact that the CG-4A glider, although placed in quantity production, was still an experimental machine. In October, 1942, it was decided not to attempt any further development or refinement of the CG-4A other than normal production improvements. The reason for this decision lay in the fact that production schedules precluded "the obvious delay occasioned by any major design changes."[19] Moreover, the cargo glider was built with the specific mission of accomplishing one transport flight, not to be used as a training ship for approximately four hundred hours.

Although the maintenance problem of the cargo glider still remains extremely acute, one recent development promises to alleviate the situation to some extent in field operations. The Technical Training Command Glider Mechanic School at Sheppard Field, Texas, has de-

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12. Maintenance Division, AFASC to Aircraft Section, AFASC, Jan. 11, 1943, in ibid.
13. AFASC to Director of Technical Inspection, Sept. 1, 1942, in ibid.
14. Daily Diary, AFRIT, Dec. 26, 1942.
15. R&R, AC/AS, Training to AC/AS, Materiel, Maintenance and Distribution, March 29, 1943, in AAG 452.1, Gliders. (AC/AS, Materiel, Maintenance and Distribution hereinafter cited as AC/AS, MM&D).
16. Memo for CG,AFAMC by Chief, Engineering Division, Materiel Division, Jan. 25, 1943, in ibid.
17. Memo for AC/AS, MM&D by Technical Executive, AFAMC, April 19, 1943, in ibid.
18. R&R, AC/AS, Training to Special Assistant for the Glider Program, May 7, 1943,in AAG 353, Glider Training. (Special Assistant for the Glider Program hereinafter cited as AFSAG).
19. CG,AFAMC to J. J. Cochran, Oct. 8,1943, in AAG 452.1 C, Gliders.

veloped a mobile field unit equipped to perform first and second echelon maintenance on CG-4A gliders. This unit consists of portable maintenance equipment such as welding installations woodworking units, painting materials, and lighting facilities installed in a CG-4A glider. In an airborne operation these units could be transported along with the glider echelon. Although the Air Service Command has been directed to make a study of the problem, and although the units are now being employed in maneuvers, they are still in the experimental stage and their worth remains to be determined.[20]

Conditions in Glider Pools. On January 7, 1943, the Flying Training Command reported on the status of the glider program. The accumulation of students in the glider pools was still a very grave problem. At the end of 1942 there were 10,294 students committed to glider training. The Civilian Pilot Training Program had yet to deliver 1,451; 5,585 were in pools; and only 3,258 were actually in training. Training was progressing at such a slow rate that it was taking nine months to process a student through the various phases, three months being spent in actual training and six months in the pools.[21]

The increasing accumulation of students in these gliders pools was creating a serious morale problem. During the time the trainees were in the pools they had no constructive work to do, often received no instruction, were told nothing about the program ahead, and it would seem that little attempt was made to explain the delay to them. Naturally, the result was often utter discouragement and serious dissatisfaction on the part of the trainees.[22] In the early days of the procurement program, glittering promises of training within six weeks and rapid advancement had been given. Moreover, in an effort to equalize the pools, students were being continually shifted from station to station, and such movement often caused misadministration of records and consequent delay in receipt of pay. Temporary housing conditions at some of the stations were far below standard, tentage without adequate water or electrical facilities being employed.

Attempts to Remedy the Morale Problem. Various attempts had been made to remedy this serious situation, both by the Flying Training Command and higher Headquarters. There were numerous suggestions and tentative steps toward an educational program as to the future training course, explanation of the delays and lack of equipment, and discussion of the tactical use of gliders. Also, it was recommended that concentrated infantry drill, training in firing of small arms, and intensive physical conditioning be instituted.[23] For example, on October 3 the training centers were instructed to pool all basic glider graduates at the advanced glider stations, to organize them into units under the commissioned student glider pilots, and to arrange their routine so that they would remain occupied as much as possible and at the same time render maximum assistance to the advanced training program. They were to be given flying on liaison type planes, passenger rides in CG-4A gliders, Link trainer time, and ground crew instruction on the cargo gliders.[24] Such measures, however, were left to the discretion of the staffs at the various pools and glider schools, and it would appear that at no time until the spring of 1943 was an effective or coordinated effort at giving the glider students sufficient occupation achieved.

Meanwhile, the Flying Training Command took several steps designed to alleviate the serious morale problem and to relieve congestion in the pools. In October the Command requested authority to grant furloughs up to thirty days for students awaiting training in the pools.[25] This authority was finally granted December 27, 1942,[26] but was rescinded on January 25, 1943, in accordance with a decision of A-1 and A-3.[27] About the same time the

20. Supply and Maintenance Branch, AC/AS, MM&D to CG,AFASC, July 16, 1943, in AAG 452.031 #2, Misc. Maintenance and Repairs.
21. Asst. AG,AAFFTC to CG, AAF, Jan. 7, 1943, in AAG 353, Glider Training.
22. R&R, AFRAS to AFRIT, Oct. 3, 1942, in AAG 211 E, Pilots.
23. Ibid.
24. AG,AAFFTC to CG,GCAFTC, Oct. 3, 1942, in AAFFTC Files.
25. Daily Diary, AAFFTC, Oct. 16, 1942.
26. Ibid., Dec. 28, 1942.
27. Daily Diary, AFRIT, Jan. 25, 1943.

Command directed the training centers to discontinue enrollment of trainees who were procured from eliminated aviation cadets,[28] and also requested authority from Headquarters to allow qualified men awaiting training to apply for aviation cadet training.[29] This authority was granted November 6, 1942, provided that no students trained by the C.P.T. be permitted to apply.[30]

The efforts of the Flying Training Command, however, met with little success. Rumors were current among the students that no specific need for their services existed because the tactical employment of gliders had been found unsuccessful.[31] It appears that a superficial effort was made to disseminate information designed to lift the trainees' morale by glamorizing the role of the glider pilot. The fact that procurement of additional personnel had been suspended in November and that students awaiting advanced training had been permitted to attend Officer Candidate School or volunteer for duty as liaison pilots with the Field Artillery only served to substantiate these rumors.[32]

Loss of Flying Proficiency. The accumulation of glider trainees in pools raised still another problem. When the students finally progressed from a pool to another stage of training, it was found that they had lost a good portion of their flying proficiency, Consequently, and in order to improve morale, on January 4, 1943, the Flying Training Command was directed to give these students flying time in light aircraft.[33] The Command, in accordance with this directive, distributed the liaison planes not needed at the Elementary Schools to all the pools. It was estimated that the ratio of one plane to every ten students should provide a minimum of about four hours flying time a month.[34] This would indeed be an improvement over the existing situation. At the two elementary pools there had been an average of two hours and twenty minutes flying time a month at one pool and no flying at the other. There had been no flying at the 3 basic pools, and of the 4 advanced pools, one had given 3 hours and 51 minutes, another 2 hours and 45 minutes, another 6 hours, and another 10 hours.[35] Again the ever-present lack of coordination which characterized the glider program had produced a serious situation.

On February 4, 1943, an AAF Regulation authorized commanding officers of Army Air Forces activities to grant permission to glider pilots to pilot liaison type aircraft of 180 h.p. or less provided they:

1. Hold a currently effective military aeronautical rating of Glider Pilot; and
2. Have demonstrated by a check flight, to the satisfaction of the commanders concerned, their ability to operate safely and efficiently the aircraft involved.
3. Make no landings away from the home airport other than satellite or auxiliary fields of the home airport.

This regulation was designed to maintain the pilots' proficiency in motorless flight, not to give them training in piloting heavier-than-air craft.[36]

Attempts to Accelerate Advanced Training. The Flying Training Command was greatly concerned over the numbers of students in the pools and desired to utilize every possible means to speed up training. The rate of advanced training was limited by the fact that not more than four hours' towing a day for each airplane could be obtained by

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28. Daily Diary, AAFFTC, Oct. 16, 1942.
29. AG,AAFFTC to CG,AAF, Oct. 25, 1942, in AAG 353, Glider Training.
30. 1st Indorsement (AG,AAFFTC to CG,AAF, Oct. 25, 1942), AFPMP to CG,AAFFTC, Nov. 6, 1942, in ibid.
31. R&R, AFRIT to AFRAS, Dec. 22, 1942, in AAG 211, Pilots.
32. TE6E 925-L, CG,AAFFTC to CG,AFGCTC and CG,AFWCTC, Dec. 16, 1942, in AAFFTC Files.
33. AFRIT to AAFFTC, Jan. 4, 1943, in AAG 353, Glider Training.
34. AAFFTC to AFRIT, Jan. 19, 1943, in ibid.
35. TWX, CG,AAFFTC to AFRIT, Jan. 14, 1943, in ibid.
36. AAF Reg. 60-19, Feb. 4, 1943.

the Troop Carrier C-47 and C-53 aircraft. The Command hoped that when the C-60A planes were assigned, more hours could be obtained, and if possible, double tows made.[37] If this could be done, and if the maintenance difficulties of the CG-4A gliders could be solved, the Command believed that the rate of advanced glider training could be increased considerably. On January 15 the Materiel Command was directed to conduct experiments "to determine whether or not it is practical to tow two CG-4A gliders using C-60 aircraft."[38] The Materiel Command reported on the results of this test late in February. It was found that the C-60A "will operate satisfactorily when towing one or two CG-4A gliders insofar as engine cooling is concerned provided the minimum indicated airspeed is 120 miles per hour."[39] By the time this report was received, however, subsequent downward revisions in the glider program obviated the necessity for increasing the rate of advanced training by this means.

At the same time steps were taken by the Directorate of Individual Training to call to the attention of the Commanding General of the Troop Carrier Command the small amount of flying time being obtained by its aircraft.[40] This apparent lack of cooperation between the Troop Carrier pilots and the glider pilots seems to have been another factor that tended to slow down advanced training. Station organization provided for two entirely separate squadrons, glider and Troop Carrier, and it would seem that there was very little cooperation operationally or association socially.

Necessity for Combat Training. During the latter part of 1942, and especially as training in tactical type gliders began to get under way, the individuals responsible for the glider training program began to develop a consciousness of the training needs of the glider pilot in view of his eventual employment as a member of an airborne division. As it was the Flying Training Command's function to provide only the individual training of the glider pilot, it had been planned that ground combat training would be received in connection with operational training with airborne troops.

But by November a new attitude toward this established policy began to develop in the Air Forces. It was felt that

> much of the ground combat training could advantageously be given to these pilots while in glider pools awaiting further flying instruction, since this would in no way interfere with their training as pilots, and would obviate the necessity of giving them ground training later on when they will be busy in tactical training with Airborne troops. . . .

Consequently, on November 16, 1942, the Director of Air Support recommended to the Commanding General of the Army Ground Forces that Infantry officers be temporarily attached to the Flying Training Command as instructors.[41]

Pursuant to this request, Lieutenant Colonel M. A. Quinto of the 88th Glider Infantry, Airborne Command was delegated to survey the glider pilot training program. He found that the Flying Training Command was concerned principally with the individual training of the pilots, but that after waiting many months for a decision from higher authority as to the probable uses of the glider pilot after the completion of his transport mission, the Flying Training Command would welcome any action on this matter. The Command suggested that Infantry training could best be given in the advanced pools because of the larger amount of time available. Quinto reported that adequate facilities for the conduct of Infantry training were lacking at the advanced stations. He recommended, however, that at each of the four Advanced Schools a six weeks' course of instruction consisting of basic military training,

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37. AG,AAFFTC to CG,AAF, Jan. 7, 1943, in AAG 353 A, Glider Training.
38. R&R, AFRIT to AFAMC, Jan. 5, 1943, in AAG 452.1, Gliders.
39. Memorandum Report, Materiel Division, Serial No. Eng.--M--51/4564-1-4, Feb. 26, 1943, in AAFFTC Files.
40. 1st Indorsement (AG,AAFFTC to CG,AAF, Jan. 7, 1943), AFRIT to CG,AAFFTC, Jan. 13, 1943, in AAG 353 A, Glider Training.
41. AFRAS to CG, Army Ground Forces, Nov. 16, 1942, in AAG 211, Glider Pilots. (Army Ground Forces hereinafter cited as AGF).

small arms, marksmanship, hand grenades, hasty entrenchments, camouflage, map and aerial photography, demolitions, glider-borne tactics, guerrilla warfare, night operations, supply and resupply of troops, evacuation, and communications be instituted. The report also recommended that sufficient Infantry instructors be detailed to these schools, and that an officer from the Airborne Command be assigned to supervise this instruction.[42]

On December 27, 1942, Lieutenant Colonel Quinto's report was forwarded from the Army Ground Forces to the Air Forces with the following comment:

> Facilities for ground training have been found to be inadequate at the glider schools at which pilots are awaiting advanced glider training. It would appear more desirable to undertake ground training at tactical glider stations in conjunction with airborne troops thereat. This avoids setting up an instructional group and obtains /obtaining/ arms, equipment and overhead personnel, all of which are difficult to obtain.[43]

But this decision of the Army Ground Forces did not close the matter. The Airborne Command recommended that the Flying Training Command conduct the Infantry training of advanced glider students, but that Command advised that it would assume no responsibility for this type of training, although it would readily concur in a plan to order students from the pools to the stations of the Airborne Command provided such a program would not interfere with advanced training.[44] Negotiations were continued between the Director of Air Support and the Ground Forces, but apparently no final decision was ever reached.[45] On January 9, 1943, the Flying Training Command was instructed to continue the ground courses already established.[46]

Accordingly, on January 12 the Flying Training Command instructed the training centers to institute a revised program of instruction in the glider pools.[47] The program required at least 4 hours a month of flying in light airplanes, 1 hour a day of physical training, a minimum of 6 hours a week in Morse code and communications, Link trainer instruction, and first aid, 6 hours a week in any available small arms, and 6 hours a week servicing and maintenance work on light airplanes. It also suggested 2 hours a week of interior guard duty, 6 hours of elementary squad and platoon tactics, 2 hours of demolition and explosives, and "any additional training in keeping with whatever facilities are at the disposal of the Commanding Officer at the post where the pool is located."[48] Some of the courses prescribed in this curriculum were already being given, and it has been reported that actually little change took place in pool instruction, as the lack of equipment throughout the Command precluded any comprehensive combat training.

Plans for Consolidated Glider Pool. Meanwhile, the Command had been acting to establish a consolidated pool of all basically trained glider students. It had been hoped that by accumulating these 5,000 trainees in one pool a more coordinated program of ground instruction could be established, thereby better preparing the glider pilot for his future mission and incidentally raising the generally low state of morale. The Technical Training Command had agreed to make available its facilities at Lincoln, Nebraska, in January,[49] Arrangements were made for the transfer of students to this station after February 19;[50] however, due to a subsequent reduction in the program, the consolidated pool at Lincoln was never established.[51]

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42. Lt. Col. M. A. Quinto to CG,Airborne Command, Dec. 17, 1942, in AAG 353.9, Bombardier Training.
43. 1st Indorsement (Lt. Col. Quinto to CG, Airborne Command, Dec. 17,1942), Hq., AGF to CG,AAF, Dec. 27, 1942, in ibid.
44. Daily Diary, AFRIT, Jan. 7, 1943.
45. R&R, AFRAS to AFRIT, Jan. 9, 1943, in AAG 352.11, Glider Schools.
46. AFRIT to CG,AAFFTC, Jan. 9,1943, in AAFFTC Files.
47. AG,AAFFTC to CG,AAF, Jan. 12, 1943, in ibid.
48. Instruction to be given Air Forces Personnel in Glider Pools, Jan. 6, 1942, in ibid.
49. Daily Diary, AFRIT, Jan. 22, 1943.
50. Daily Diary, AAFFTC, Feb. 1, 1943.
51. Ibid., Feb. 15, 1943.

In the meantime, February 8 and 9, 1943, a conference was convened at the Headquarters of the Flying Training Command to formulate the Consolidated Glider Pool program of instruction and to attempt some coordination between the work of the Flying Training, Troop Carrier, Technical Training, and Airborne Commands. The conference was attended by representatives of these Commands, the Lincoln Air Base, the Gulf Coast and West Coast Training Centers,and the Directorate of Individual Training.

Throughout the entire glider program the Flying Training Command had operated under the concept that its responsibility was to train the individual, the function of tactical training belonging elsewhere. The purpose of the consolidated pool was to afford the glider pilot trainees "as much individual ground training as can possibly be done so that when they go to the using agency they will be well prepared to fit into the using agency." The Airborne Command representatives stated that to be of use to that Command the glider pilot must be able to function as a member of a combat team; therefore, he should receive training in the ground arms and the techniques of the functioning of the combat team.

Colonel R. G. Landis of the Troop Carrier Command stated that he believed the problem was one between the Flying Training and the Troop Carrier Commands. Due to the decisions of a conference held a few days previously in Washington, pilots were to be transferred to a pool to be established by the Troop Carrier Command for further training. If the Flying Training Command would give these pilots good basic training, the Troop Carrier Command would do the rest.

The conference decided that the following subjects should be included in the program of instruction: first aid, bivouac, care of clothing and equipment, field sanitation, physical training and personal fitness, military drill, use of maps and aerial photography, communications, maintenance of the glider, weather, navigation, small arms, interior guard, guerrilla warfare, and chemical warfare. Pending receipt of instructions from Headquarters, regarding a contemplated reduction of the glider program, it was decided to hold further decisions in abeyance.[52]

Status of the Glider Program. The downward revisions of the glider pilot training objective, although obtaining better integration of materiel and production quotas, had created a situation in which more students had been started in training than were required by the existing directive. Consequently, in reporting the status of the program on January 7, the Flying Training Command requested that it be allowed to train approximately 9,295 glider pilots, thereby utilizing all those who had been entered in training. A revised flow chart based on this program was submitted.[53]

A few days later the Director of Individual Training submitted this flow chart to the Director of Military Requirements and the Assistant Chief of the Air Staff, A-3, requesting its approval. Individual Training pointed out that the new chart was based on General Arnold's decision to reduce the advanced course from fifteen to eight hours. As indicated requirements for glider pilots in future operations did not exceed 9,295, it was requested that no decision be made to continue training beyond October 27, 1943, when it was estimated that the last class under present procurement would graduate. If it appeared later on that tactical commitments would require more pilots, elementary training of newly procured trainees could be started on June 1, 1943, provided the Civil Aeronautics Administration was notified by May 1. These suggestions were concurred in by the Director of Military Requirements, January 9, 1943.[54] But recent developments in Headquarters were to place an entirely new light on the glider program and its future, and to produce an even more radical revision.

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52. Memo for CG,AAFFTC by A-3, AAFFTC, Feb. 9, 1943, in AAFFTC Files.
53. Asst. AG,AAFFTC to CG, AAF, Jan. 7, 1943,in AAG 353, Glider Training.
54. R&R, AFRIT to Director of Military Requirements and A-3, Jan. 15, 1943, in AAG 353 A, Glider Training. (Director of Military Requirements hereinafter cited as AFDMR).

Summary. The period, December 1, 1942, to February 18, 1943, constituted a transitional phase in the glider pilot training program: a link between all former stages and the radical revision of almost every aspect of the program which occurred in February, 1943. In the two and one-half months, almost all the major trends that had been gathering momentum since the inception of the 6,000 Program reached the high point of their development. The combination of factors which created the tremendous accumulation of students in pools resulted in an extremely serious and almost insurmountable morale problem and a loss of flying proficiency on the part of the glider trainees. Throughout this period the Flying Training Command, while attempting to accelerate the rate of training by various measures, endeavored to find solution for these problems. The growing consciousness of the combat mission of the glider pilot coupled with a desire to give him sufficient occupation developed into a realization of the need for coordination of the glider training program between the Ground and Air Arms--a consideration that assumed greater importance and significance thereafter. The lack of adequate materiel, although still a serious factor, is somewhat eclipsed by these other problems. The materiel situation did assert itself, however, in the glider maintenance and structural failure difficulties experienced during this period. The link had been forged; revision had to come.

Chapter IX

THE FEBRUARY 18, 1943, REVISION OF THE GLIDER PILOT TRAINING OBJECTIVE AND THE DISPOSITION OF EXCESS GLIDER PERSONNEL

New Governing Factors. As the glider program progressed, it was to be expected that other interested agencies would begin to exert a stronger influence and that the salient factors affecting the over-all program should become more numerous and complicated. During January, 1943, discussion prevailed in Headquarters that brought about even a more radical revision of the glider program than that recommended by the Flying Training Command.

Recommendations of the Operations Division. On January 12, 1943, Brigadier General Thomas T. Handy, the Assistant Chief of Staff, Operations Division, War Department General Staff, recommended to General Arnold that 6,000 gliders and 6,000 glider pilots would be "entirely adequate to take care of maximum anticipated demands during 1943." This recommendation was founded on a new basis, the logistic difficulties of moving gliders to theaters. When the preliminary doctrines for the tactical employment of gliders had been formulated, it was believed that Troop Carrier units would be transported overseas with their full glider echelons. But by January, 1943, only a very few gliders were being shipped because the extreme difficulty connected with their transport was causing commanders of active theaters to give them a low priority. Theater commanders had been informed of the tactical uses and characteristics of the CG-4A glider by Adjutant General letter, November 8, 1942, but due to the high priority accorded other necessary war materials, it was believed that very few gliders would be requested for some time. The construction program for 1943 required 6,000 gliders, and inasmuch as the glider echelon of the 1943 program of twenty-six Troop Carrier groups would contain only about four thousand gliders, it was believed by the Operations Division that 6,000 glider pilots would be entirely adequate to meet any anticipated strategic demands. Accordingly, it was recommended that the glider pilot program be placed in consonance with demands, and that if a backlog of unshipped glider echelons existed, that these be attached to new Troop Carrier units, and that the residue of partially trained glider pilots be diverted to other programs.[1]

Recommendations of Troop Carrier Command. As the glider program was originally visualized, glider pilots, upon completion of their advanced training under the Flying Training Command, were to be attached to Troop Carrier units, receive operational training, and then be committed with the Troop Carrier groups to active theaters. The Troop Carrier Command, however, during 1943, on the basis of twenty-six groups, would not be able to absorb anywhere near the numbers of pilots that would be produced. General F. S. Borum, Commanding General of the Troop Carrier Command, stated January 22, 1943, that this situation was further complicated by the fact that

> during the first three months of the life of a new Troop Carrier Group, it does not have aircraft and sufficient trained personnel available to give its glider echelon any training; but beginning with the fourth month of life of that group, sufficient experienced personnel and aircraft should be available to undertake the individual glider pilot's training to the point where he is qualified to participate in tactical glider missions in units of this Command; and secondly, the conduct shortly thereafter of such tactical glider operations . . . .[2]

Due to this situation, it would appear that by the end of 1943 there would be at least 6,500 surplus glider pilots for whom the Troop Carrier Command could not provide the necessary training or have any tactical use.

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1. Memo for CG,AAF by Brig. Gen. T. T. Handy, Jan. 12, 1943, in AAG 353 A, Glider Training.
2. CG,AFTCC to CG,AAF, Jan. 22, 1943, in ibid.

General Borum stated, however, that if some method could be worked out for moving the Troop Carrier glider echelons and their equipment overseas, then "the problem simplifies itself to one of physically handling the surplus until they are required by this Command." The Troop Carrier Command, cognizant of the existing serious morale problem, stated that it believed that the most effective method of raising the glider pilots' morale was "to move them rapidly and efficiently through a training and shipment program, when they do become a part of tactical organizations. It is, therefore, recommended that they not be placed in this Command until such training and movement can be effected with reasonable velocity." General Borum, therefore, suggested that only enough glider personnel be assigned to his Command to fill the scheduled glider shipments. The surplus pilots should be maintained within the Flying Training Command in order that the Troop Carrier Command could "maintain its maximum effective potentialities in raising the morale of those fortunate enough to be assigned for overseas training and shipment."[3]

The Troop Carrier Command, having thus defined its attitude toward the execution of the glider program, suggested several methods by which the Flying Training Command might solve its problems. The advanced stage of training should be increased, thereby better qualifying the glider pilots for future instruction in tactical operations. The small pools of glider pilots should be accumulated in one or more large pools, and "every possible step taken to make available to them liaison and glider aircraft." While the trainees were in pools, they should be given an intensive ground course including Link trainer, navigation, communications, and other aeronautical subjects, coupled with comprehensive courses in the ground arms, and if time permitted, an elemental course in ground tactics. The Command also recommended that if an actual surplus of glider pilots did exist, immediate steps should be taken to allocate the surplus to other training, exclusive of these pilots needed as initial or replacement members of Troop Carrier glider echelons.[4]

Recommendations of A-3. Due to these new developments, on January 30 A-3 recommended to the Chief of the Air Staff that the glider pilot program be revised to a final total of 6,000 trained glider pilots and that their flow be regulated to conform with the ability of the Troop Carrier Command to utilize them. A-3 also recommended that the advanced stage be reinstated at fifteen hours' flying time. The excess personnel resulting from this reduction would be diverted to other types of training.[5]

Recommendations of the Flying Training Command. The Flying Training Command was still faced with tremendous problems in the administration of the glider pilot program. Although it had been informed that production was apparently in excess of contemplated need and that a lower rate was planned for 1944, the extremely low state of the glider trainees' morale necessitated that training be continued as rapidly as possible. There were certain concrete difficulties, however, that made it difficult to continue training at even the present rate. These were the loss of training stations, the transfer of Troop Carrier aircraft from the Command's jurisdiction, and the delay in delivery of the C-60 airplanes needed to replace the Troop Carrier aircraft. On January 29, therefore, the Flying Training Command recommended that if a reduction in training was to take place, the students in pools should be diverted to some other training as soon as possible.[6]

Pursuant to these new developments and recommendations, Headquarters realized the necessity for definite decisions to achieve a coordinated glider program. For almost two years the glider program had been proceeding without the benefit of coordinated planning. This lack of integration, partially caused by rapid expansion, had led to numerous problems which had to be solved by the agencies charged with the execution of the program.

Recommendations of Conference to Determine Glider Program. On February 5, 1943, a conference was convened in the A-3 Division, presided over by Colonel R. W. Harper, chief of that division, and attended by representatives of A-1, A-4, the Directorate of Air Support, the Directorate of Individual Training, the Materiel Command, the Troop Carrier Command, the Flying Training Command, and the Air Transport Command. The conference first considered the recommendations of the Operations Division, General

3. Ibid.
4. Ibid.
5. R&R No. 3, A-3 to C/AS, Jan. 26, 1943, in AAG 353 A, Glider Training.
6. AAFFTC to CG,AAF, Jan. 29, 1943, in AAG 353, Glider Training.

Staff, to reduce the glider program to 6,000 pilots in congruity with the glider production program. In an effort to determine glider production, Colonel A. P. Weyland, Office of the Director of Air Support, stated that 4,056 gliders would completely equip, on a basis of three gliders to each transport, the entire twenty-six Troop Carrier groups scheduled for activation under the 273 Group Program. Colonel E. C. Langmead, A-4 representative, felt, however, that glider production should be continued so that the glider industry could be maintained in a position where it could quickly expand to meet any future production demands. He stated that "by continuing the present production schedule of 6,000 gliders we can control the total number to be produced by changing the preferential rating assigned to the contractors thereby increasing or decreasing the flow of critical materials to them." Major A. F. du Pont, Jr., S-3 Division, Air Transport Command, stated that conducted tests indicated that the CG-4A glider was not suitable for use as a cargo trailer, but that the Air Transport Command was very interested in a wing designed cargo trailer developed by Air Transport, Inc. Colonel R. G. Landis, Chief of Staff of the Troop Carrier Command, expressed the desire of that Command to test one of these gliders, as it was understood that it had a capacity of from thirty-eight to forty passengers. Consequently, the conference recommended that the Materiel Command expedite the development of the wing glider. A-4 further recommended that the Materiel Command initiate a project to break down the CG-4A glider into smaller components to save shipping space, and thereby help to solve the logistic difficulties attendant to overseas movement.[7]

The production phase of the glider program having been settled, the conference turned to the consideration of glider personnel. Colonel Weyland stated that initially the twenty-six Troop Carrier groups would require only 2,912 glider pilots, and Colonel Landis added that the present flow of glider pilots from the Flying Training Command was more than the Troop Carrier Command could possibly absorb. He recommended extension of the advanced phase from eight to fifteen hours, thereby delaying the output and producing more competent pilots.

The final recommendations of the conference were:

1. That the present production schedule calling for delivery of 6,209 CG-4A gliders by January 1, 1944, be considered adequate to meet the glider program.. This will provide a production nucleus which can be expanded to meet unforeseen requirements. . . .
2. The the present glider pilot training program be reduced to a total of 4,000 by January 1, 1944.
3. That the flying time required to train glider pilot students in the advanced phase of training be increased from eight to fifteen hours.
4. That the Assistant Chief of /Air/ Staff, A-1, through the Director of Military Personnel, take the necessary action to absorb by other means the excess glider students now accumulated in the Flying Training Command.[8]

Recommendations of Board to Determine Glider Program. On February 11 a board of officers composed of Brigadier General Bennett E. Meyers, Chief of Staff, Materiel Command, Colonel Richard H. Ballard, Assistant Chief of the Air Staff, A-4, and Colonel Robert W. Harper, Assistant Chief of the Air Staff, A-3, met in Washington to determine the Army Air Forces Glider Program. This board considered the recommendations of the conference of February 5, the tactical requirements of the Troop Carrier Command, the recommendations of the Operations Division, the present fifteen-place glider production schedule, and the large number of students awaiting training in the Flying Training Command. The recommendations of this board formed the basis for the 1943 glider pro-

7. Minutes of a Conference held in A-3 Division, Air Staff, Feb. 5, 1943, to determine the AAF Glider Program, Tab "C", Feb. 8, 1943, in AAG 452.1, Gliders.
8. Ibid.

gram. They were:

1. That the present production estimate . . . scheduling the delivery of 6006 CG-4A gliders by December 31, 1943, is adequate to meet Army Air Forces glider requirements.
2. That the Air Service Command be directed to provide suitable storage facilities for these gliders in the event they are not immediately employed.
3. That the Materiel Command should expedite the development of a cargo glider to meet requirements of the Air Transport Command.
4. That the present 8000 glider pilot training program be reduced to a total of 4054 trained glider pilots by January 1, 1944. . . .
5. The flying time required to train a glider pilot in the advanced phase should be increased from eight to fifteen hours.
6. The Assistant Chief of Air Staff, A-1, through the Director of Military Personnel, should take the necessary action to absorb by other means the excess glider students now accumulated in the Flying Training Command.
7. That the Director of Air Support take the necessary action to have the Troop Carrier Command set up a school for glider pilot graduates that may be accumulated within the Command as a result of the shortage of shipping space. Instructions in the use of ground arms and ground tactics should be included in the curriculum. One hundred puddle jumpers will be allocated to the Troop Carrier Command in order that the glider pilots may maintain their flying proficiency.
8. That on July 1, 1943, a Board of Officers be appointed to review the glider program in the light of the situation as it then exists.[9]

Revision of the Glider Program. With the approval of these recommendations by the Chief of the Air Staff,[10] the policies and directed action for the achievement of a coordinated glider program were finally established. It now remained for the responsible agencies to place them in effect. On February 12, 1943, Headquarters took the necessary action to discontinue the calling of enlisted reservists to active duty for glider training. A-1 formally instructed the Director of Personnel to make no more requests to The Adjutant General to order enlisted reservists to active duty.[11]

On February 18, 1943, the Director of Individual Training transmitted the final revision of the glider pilot program to the Flying Training Command. The Command was directed to produce enough glider pilots to meet the total Troop Carrier Command requirement of 4,054 by December 31, 1943. As a number had already graduated, the 1943 quota was placed at 3,418. After March, production was not to exceed 250 graduates a month.

There were approximately ten thousand students in the various stages of training; therefore, this new directive presented the problem of disposing of about fifty-five hundred excess trainees. The Command was directed to divert students in the elementary or basic stages or from the glider pools. A sufficient number of advanced trainees were to be retained to permit an increased elimination rate, and thereby provide a substantial improvement in the quality of the product. Inasmuch as no requirement had been established for glider pilots for 1944, authority was granted to close all glider schools that could not be diverted to other training.

This directive also specified that "the Advanced course of flying will be re-established at 15 hours of first pilot training in addition to co-pilot time, stressing training phases which will qualify the graduate to meet the standards set up by the Troop Carrier Command." As soon as possible the Flying Training Command was to implement the program of instruction for pooled trainees formulated at the conference of February 8 and 9,

9. Board Report on Recommendations for Army Glider Program, Feb. 11, 1943, in AAG 452.1, Gliders.
10. Daily Diary, AFRIT, Feb. 18, 1943.
11. R&R, AC/AS, A-1 to AFDOP, Feb. 12, 1943, in AAG 353, Glider Training.

1943, at its Headquarters. This course was to be given to the students retained for further training, with special effort devoted to maintaining their flying proficiency.

As a pool of trained pilots was to be established in the Troop Carrier Command, the Flying Training Command was also directed to transfer 100 liaison type airplanes to the former's jurisdiction. The directive further specified that the Command immediately conduct an individual personnel survey of all trainees for the purpose of diverting them to other types of training or to other assignments.[12]

Effectuation of the Revision. The following day, February 19, the Flying Training Command transmitted its instructions to the training centers. All Elementary and Basic Schools were to be closed within thirty days. Basic graduates and those who had entered the basic course prior to February 10, 1943, were to be segregated for further training. The remaining trainees were to be held in pools and given ground training, but they were not to be maintained on flying status.[13] These students were returned to flying status on March 1, however, as this policy created an adverse morale situation.[14] Advanced glider training was to be increased immediately to fifteen hours, and after March 1 students were to be entered in advanced training on the first and sixteenth of each month on the basis of four students to each tow plane.[15] This marked the first real application of the new policy of regulating the flow of students, namely, recognition of the importance of the materiel factor in determining both quantity and quality production.

The training centers immediately proceeded to place the revised program in operation. By the fifteenth of March glider training had been terminated at the Elementary Schools at Hamilton, Texas, Okmulgee, Oklahoma, Tucumcari, New Mexico, and Fort Morgan, Colorado. The Elementary Schools at Pittsburg, Kansas, and Plainview, Texas, had been transferred to the liaison pilot training program. The Basic Glider Schools at Greenville, South Carolina, Mobile, Alabama, Vinita, Oklahoma, and Lamesa, Texas, had also been closed. The Basic Schools at Twenty-nine Palms, California, and Wickenburg, Arizona, were redesignated for power pilot training, and Fort Sumner, New Mexico, was to be used as an Advanced Glider School,[16] as that type of training had been discontinued at Dalhart, Texas, February 20, 1943.[17] The reduced training objective soon obviated the necessity for four Advanced Schools. Consequently, after a few classes, operations terminated March 31 at Victorville, California, and Stuttgart, Arkansas, and approximately April 15 at Fort Sumner, New Mexico. All advanced training was now concentrated at South Plains Army Air Base, Lubbock, Texas.[18]

On February 27 the training centers were directed to pool the students who were to be retained for advanced training at Lubbock, Texas. Actually, in conflict with Headquarters estimates, nearly two thousand glider pilots had already graduated; therefore, the number of trainees in this pool was not to exceed 2,500. Commencing April 1, 1943, this number was to be reduced by graduation of about two hundred and fifty trainees a month. As directed February 18, the program of instruction formulated by the conference of February 8 and 9, 1943, was to be inaugurated at this pool by March 15.[19]

Disposition of Excess Glider Personnel. On February 16, the Air Forces had acted to implement the machinery for the disposition of the excess glider pilot personnel. On that date A-1 had submitted its recommendations to G-1. The 10,000 trainees in question had been secured from a variety of sources, including officers, warrant officers, and enlisted men of the Army Air Forces, Army Ground Forces, and Services of Supply;

12. AFRIT to CG,AAFFTC, Feb. 8, 1943, in AAG 353.01 A, Training Programs.
13. CS,AAFFTC to CG's, TC's, Feb. 19, 1943, in AAFFTC Files.
14. TWX, AAFFTC to CG's, TC's, March 1, 1943, in ibid.
15. CS,AAFFTC to CG's, TC's, Feb. 19, 1943, in ibid.
16. R&R, AFRIT to Flight Control, March 16, 1943, in AAG 353, Glider Training.
17. Daily Diary, AAFFTC, Feb. 20, 1943.
18. Ibid., April 3, 1943.
19. AG,AAFFTC to CG,GCAFTC, Feb. 27, 1943, in AAFFTC Files.

aviation cadets, eliminated aviation cadets, and aviation cadet candidates; enlisted reservists and civilians. As soon as the Flying Training Command had completed its personnel survey to determine the qualifications of the excess trainees, these students would be reassigned to other duties on a voluntary basis. It was felt, however, that a few individuals might refuse to volunteer for reassignment. In the case of those individuals who had entered glider pilot training from active duty with the Army, their removal and reassignment was justifiable. But there were some trainees who had entered the Service for the express purpose of pursuing glider pilot training, and in their case the Air Forces felt "morally obligated" to permit them to return to civilian status provided that reassignment to some other duty was not acceptable to them. Consequently, A-1 recommended that the Army Air Forces be authorized to:

1. Establish boards of officers to determine the qualifications of excess glider pilots and glider pilot trainees for reassignment or transfer to other duties in the Army.
2. Reassign or transfer excess glider pilots and glider pilot trainees to other duties in the Army for which they are qualified, including transfers to the Army Ground Forces or Services of Supply for officer candidate training or for reassignment to their former organizations.
3. Discharge from the Army such excess glider pilot trainees who enlisted in the Army for the sole purpose of undergoing glider pilot training, and for whom no suitable duties are available to which they might be reassigned or transferred.[20]

The recommendations of the Army Air Forces were approved by the General Staff on February 22, 1943. On February 25 A-1 formally charged "the Director of Personnel in coordination with the Director of Individual Training under directives and policies issued by A-1 Division" with the administration of the disposition of excess glider personnel;[21] informal notification had occurred three days earlier.[22]

Also on February 16, 1943, the Director of Individual Training requested the Flying Training Command to submit its recommendations on the proper methods and procedures for diverting the excess glider trainees. The following day the Command did so, recommending that all excess trainees be screened to determine their qualifications for other training or assignment. All students over thirty-seven years of age were to be given an opportunity to request discharge from the Service. Those trainees wishing to return to their former Arm of the Service and those who qualified and desired to apply for aviation cadet training, ground or aircrew, should be permitted to do so. Personnel having a minimum of 200 hours of flying time in heavier-than-air aircraft should be allowed to qualify for service pilot rating, and those with a minimum of 100 hours should be given an opportunity to attend the Central Instructors School. If qualified, trainees should be accorded an opportunity to apply for liaison pilot training or the Army Air Forces Administrative or Technical Officer Candidate Schools. Qualified trainees who desired to attend Officer Candidate Schools in other Arms of the Service should be given such an opportunity. Personnel wishing gunnery training, who had previously completed a course at an Army Air Forces Technical Training School, should be allowed to pursue this training. It was further recommended that "personnel who are qualified for or desiring any of the above opportunities for assignment be transferred to the Technical Training Command." The Flying Training Command felt that these trainees, who through no fault of their own had been forced to abandon desired training, should be accorded every possible consideration and first priority for the training they requested.[23]

Headquarters partially or wholly approved most of the Flying Training Command's recommendations, and on February 23 the Director of Individual Training, as directed by A-1 the previous day,[24] authorized the Flying Training Command to commence the diversion of excess glider personnel. The Command was

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20. Memo for G-1 by A-1, Feb. 16, 1943, in AAG 353, Glider Training.
21. R&R, A-1 to AFRIT, Feb. 25, 1943, in ibid.
22. Daily Diary, A-1 Division, Feb. 22, 1943, in AAG 319.1 B, Daily Diary.
23. CG,AAFFTC to CG,AAF, Feb. 17, 1943, in AAG 221 #2, Pilots.
24. Daily Diary, A-1 Division, Feb. 22, 1943.

> to establish boards of officers to determine the qualifications of excess glider pilots and glider pilot trainees for reassignment or transfer to other duties in the Army . . . . A conference consisting of representatives of each board will be convened at Headquarters of your Command, . . . and the interview and assignment work of the Board is to commence, for the purpose of briefing the Board on the procedure to be followed. . . . The said Board will be empowered to direct station Commanders to assign, transfer, or discharge personnel in accordance with this directive.[25]

In accordance with the recommendations of the Flying Training Command, qualified personnel were to be allowed to apply for Officer Candidate Schools of the Army Air Forces, Army Ground Forces, and Services of Supply under established quotas for these schools subject to their passing the Officer Candidate School Board. Personnel were also to be authorized to apply for reassignment to their former organizations. Trainees who enlisted for the express purpose of entering glider pilot training might be discharged from the Army. But before resorting to discharge, every effort was to be made to locate them in a suitable assignment. Station commanders must immediately report personnel so discharged to their local draft boards.[26] All enlisted trainees and glider instructors who desired and were qualified for aviation cadet training, ground or aircrew, were to be processed for this training.[27]

AAF Regulation 50-7 as modified required a minimum of 300 hours' time in heavier-than-air aircraft for qualification as service pilot. In view of the Flying Training Command's recommendation that personnel with 200 such hours should be allowed to qualify for this rating, Individual Training directed that a survey be made of available equipment within the Command for the purpose of establishing a course leading to this rating.[28] Evidently this plan was never carried out, for on March 15, 1943, the Flying Training Command informed Individual Training that, even if sufficient airplanes and facilities were available, it did not think a school of this nature should be established.[29] Actually, a very small number of trainees were processed for service pilot rating.

The recommendation of the Flying Training Command that those personnel having a minimum of 100 hours in heavier-than-air aircraft be allowed to attend the Central Instructors School was referred by A-1 to G-1, General Staff, on February 22. A-1 recommended that the trainees and glider pilots who possessed the necessary qualifications be permitted to pursue this training. After completion of the course, they would be transferred to the Enlisted Reserve for employment in civilian contract schools as flying instructors. This would not only dispose of excess glider trainees but would aid in alleviating the serious shortage of instructors in civilian pilot training schools.[30] This recommendation, however, was disapproved.[31]

Liaison pilot training for excess glider personnel was approved in so far as quotas for this training would permit. Trainees were to be allowed to make application for gunnery training provided they had received technical training in one of three specialties, radio operator mechanics, airplane mechanics, or armorers. Although the matter had been referred to the Technical Training Command, Individual Training seriously doubted at this time that all excess glider personnel would be transferred to the jurisdiction of the Technical Training Command, and this later proved to be the case. Every possible effort was to be made to effect this tremendous diversion as quickly as possible. The Flying Training Command was authorized to establish priorities for training glider personnel in all cases under the jurisdiction of the Army Air Forces, provided such priorities would not cause undue injustice to other personnel awaiting training.[32]

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25. 1st Indorsement (CG,AAFFTC to CG,AAF, Feb. 17, 1943), AFRIT to CG,AAFFTC, Feb. 23, 1943, in AAG 221 #2, Pilots.
26. Ibid.
27. Teletype, General Yount to CG's, TC's, Feb. 24, 1943, in AAFFTC Files.
28. 1st Indorsement (CG,AAFFTC to CG,AAF, Feb. 17, 1943), AFRIT to CG,AAFFTC, Feb. 23, 1943, in AAG 221 #2, Pilots.
29. AAFFTC to CG,AAF, March 15, 1943, in AAG 353, Glider Training.
30. A-1 to G-1, Feb. 22, 1943, in AAG 326.22 #2, Enlisted Men--Organized Reserve Corps.
31. Final Report, Glider Survey Board (n.d., about April, 1943), in AC/AS, Training Files.
32. 1st Indorsement (CG,AAFFTC to CG,AAF, Feb. 17, 1943), AFRIT to CG,AAFFTC, Feb. 23, 1943, in AAG 221 #2, Pilots.

The Glider Survey Board. In compliance with the directive a "special Glider Survey Board of eight officers was appointed to ascertain the desires and qualifications of each glider trainee with respect to his future, and to make appropriate recommendations for the disposition of each man." The members of the board were: Lieutenant Colonel W. L. Tubbs, President, Roswell Army Flying School, Roswell, New Mexico; Lieutenant Colonel H. A. Schmid, Central Instructors School, Randolph Field, Texas; Major D. M. Hamilton and Major H. V. Phillips, Headquarters, Flying Training Command, Fort Worth, Texas; Captain A. L. Lowery and Captain A. M. Doane, Santa Ana Army Air Base, Santa Ana, California; and Captain O. M. Brown and Captain F. P. Dunne, San Antonio Aviation Cadet Center, San Antonio, Texas.

The board convened at Headquarters, Flying Training Command March 2, 1943. The plan for the personal interviews of approximately seventy-five hundred cases was established, with special emphasis on the fact that these men were volunteers and that every consideration should be given to their individual wishes, providing they had some aptitude for the type of duty or training preferred.

The board visited each of the thirteen installations where glider trainees were stationed, and at each post all glider trainees except those already in advanced training were assembled and given an "orientation talk reviewing the situation, explaining the purpose of the board's visit, and outlining the dispositions available." Each man filled out and signed a printed form indicating his first, second, and third choices for further assignment, together with his military and civilian record. On the basis of a personal interview and the information on his form, the trainee's disposition was determined. He was rated, on a scale of from 1 to 10, as to personality, bearing and general qualifications for the disposition chosen. This plan proved to be extremely workable, the survey being conducted between March 6 and 28.

A total of 7,058 trainees was interviewed. These included all the glider trainees except those already in the advanced stage of training, those absent on furlough or for other reasons, and officers pursuing glider training in grade. The board decided that the disposition of these officers should be handled through normal procedures.[33] They were offered the opportunity to transfer to aircrew training if qualified. Those who did not meet the requisite qualifications or who did not desire this training were relieved from glider training and returned to their former organizations.[34] Only those trainees who had completed the basic stage were permitted to apply for further glider training. The choices of the glider trainees were as follows:

	Desired Disposition	1st Choice	2nd Choice
1.	Discharge (over 38 years of age)	1	0
2.	Reassignment to Former Arm of Service (including reassignment in enlisted status within the AAF)	100	115
3.	Appointment as Aviation Cadet	1216	900
4.	Service Pilot Rating	31	36
5.	Appointment to Central Instructors School	307	885
6.	Appointment to OCS AAF Administrative	410	1016
7.	Appointment to OCS (other Arms or Services)	341	836
8.	CAA War Training Service (Requiring inactivation to ERC)	513	678
9.	Flexible Gunnery Training	220	668
10.	Transfer to AFTTC for technical training	195	630
11.	Discharge from the army (as having enlisted for glider training only)	602	281

33. Final Report, Glider Survey Board.
34. Daily Diary, AAFFTC, April 1, 1943.

	1st Choice	2nd Choice
12. Further glider training	3122	226
TOTAL	7058	6273

(NOTE: 785 had declined to make a second choice).[35]

Upon its return to Headquarters of the Flying Training Command, the board proceeded to determine the disposition of the men interviewed. Study of the folders indicated that 2,493 of the students were most logically fitted for aviation cadet aircrew training. For further glider training, 1,781 were selected to be transferred to South Plains, Lubbock, Texas. But 3,122 had indicated further glider training as their first choice; therefore, certain restrictions had to be imposed. Trainees who had been held back as instructors in basic glider training were accorded first priority, and then those who had received glider mechanic training were selected. The remainder were chosen according to the ratings they had received from the board and according to the length of time they had been in the glider program. Later this number was augmented by specially qualified men who had been designated for aviation cadet training or Officer Candidate School, but had failed to qualify. The 602 who had expressed a preference for discharge were so designated. In this manner the first screening disposed of 4,876 of the excess glider pilot trainees.

Training at the Central Instructors School had been applied for by 307 men, but it was found at this time that this assignment could not be approved. Also, 513 men had chosen inactivation to the Enlisted Reserve for further training with the Civil Aeronautics Administration. After receiving these applications, the board was instructed that only men with 120 hours of regularly logged heavier-than-air time could be accepted for this training. This specification eliminated all but seventy-nine trainees, and as the matter was not definitely decided at this time, the students were pooled at the San Antonio Aviation Cadet Center.[36] They were finally inactivated effective July 1, 1943, and their further assignment was made by the Civil Aeronautics Administration.[37]

The fact that training at the Central Instructors School and C.A.A. training were not available, and that not all those who had chosen glider training could be accommodated, necessitated a rescreening of 316 men. Consequently, between April 2 and 7 the board split into three groups and revisited the thirteen stations.

Meanwhile, arrangements were under way to obtain quotas for the various Officer Candidate Schools. Considerable difficulty was experienced; quotas were denied except for AAF Administrative and Field Artillery and small quotas for Engineers, Anti-Aircraft Artillery, and Infantry.

After the board returned from its second visit to the glider stations, its survey function was virtually completed. There remained, however, the task of effecting the 7,321 dispositions. To facilitate correspondence, this procedure was handled directly with the stations. Further examination of the men's folders and other subsequent changes naturally altered some of the dispositions. For example, many of the men who had chosen flexible gunnery training could not meet the stringent physical requirements or did not possess the necessary technical background. As some of the trainees had made entirely untenable selections, it was necessary to dispose of them in other ways. Most of these were diverted to Technical Training. The final dispositions were:

Discharged	1147
Continued in Glider Training	1929
Sent to Aviation Cadet Training	2290
Sent to OCS AAF Administrative	327

35. Final Report, Glider Survey Board.
36. Ibid.
37. AG,AAFFTC to AFPMP, June 19, 1943, in AAG 353 #2, Civilian Pilot Training.

Sent to OCS Other Arms and Services	133	
Sent to Flexible Gunnery Schools	153	
Sent to TTC Schools	779	
Reassigned to Former Arm of Service or the Air Corps (reverted to grade held prior to entering glider pilot training)	473	
CAAWTS	79	
Processed for Service Pilot	8	
Miscellaneous	3	
Total Disposition	7321	38

By April 1, 1943, the tremendous task of reassigning the 7,321 excess glider pilots and glider pilot trainees was virtually completed. The Flying Training Command had made a sincere effort to assign personnel to the type of duty they desired, and on the whole diverted personnel were satisfied with their new duties. Naturally, in a project so large, there had been a few cases of maladministration and resultant dissatisfaction on the part of the trainees. [39] On the first of April the Assistant Chief of the Air Staff, Training commended the Command on its "expeditious and intelligent handling of this difficult problem in such a manner as to operate to the best interests of the War Effort." [40]

Summary. With the opening of the new calendar year, the increasingly serious problems and basic disorder native to the glider program finally forced a type of program revision unparalleled in the history of Air Forces training. Throughout January, 1943, for the first time all concerned agencies asserted their convictions as to the proper future course of the program. Each advanced a new basis for production quotas, founded on separate, and in some cases, heretofore unexpressed considerations. The presentation of these culminated in a sweeping revision of the entire program: a new and more integrated production basis, an unprecedented diversion of over one-half of the students to other types of training, and a curtailment of training to one stage. The glider program had entered a new phase; the major problems of the past were alleviated; training could now develop more efficiently and effectively under the coordinated efforts of all agencies concerned in the execution of the glider program.

38. Final Report, Glider Survey Board.
39. "Soldiers" to President Roosevelt, May 20, 1943, in AAG 031.1, The President.
40. AC/AS, Training to CG,AAFFTC, April 1, 1943, in AAG 221 #2, Pilots.

Chapter X

THE REVISED GLIDER PILOT TRAINING PROGRAM, February 18, 1943

Administrative Changes. The revised objective of February 18, 1943, and consequent reduction of personnel, required several months to attain their full effect. February and March were characterized by adjustment and reorganization both in Headquarters and in the field. In April, as the glider program entered into a new phase, General Arnold appointed Richard C. du Pont as "the special assistant to the Commanding General, Army Air Forces, in the Army Air Forces, Glider Program." Mr. du Pont, in a civilian capacity, operated in a position similar to that of an assistant chief of the air staff,[1] all matters pertaining to the administration of the glider program being centered in his office. For many years Richard du Pont had been one of the foremost gliding experts in the United States and was president of the Soaring Society of America from 1935 to 1940.[2]

Status of Advanced Training. With the reduction of the glider objective and final achievement of coordination between the flow of materiel and the graduation rate, expediency training was replaced by an honest endeavor to develop a fully trained glider pilot. All effort was now concentrated on advanced training at one school. Previously the interest of many of the power pilots connected with the program had obviously lain elsewhere, but now the men responsible for the success of the glider program, with a few exceptions, were anxious to prove the worth of the glider and the glider pilot.

As confusion in the glider program decreased, many of the heretofore irritating difficulties began to disappear. During January and February the lack of coordination between the Troop Carrier Command pilots and the glider pilots noticeably decreased.[3] By April enough C-60 planes to provide towing facilities were assigned to the glider school; therefore, on the twenty-fourth of that month the Troop Carrier Command was relieved from further tug duty for the Flying Training Command.[4] Tow pilots are now secured from recent graduates of the Advanced Twin-engine Pilot Schools. As the C-60 is a strange ship to these pilots, it is necessary for the glider school to conduct transition training. It appears, however, that this arrangement has proved to be very satisfactory. Flying time has shown a considerable increase month by month. Station organization has been revamped; a tow and a glider squadron now make up each training group. By this means a better understanding of the individual problems of the tow and glider pilots is developed by the member of the other echelon.

Advanced Program of Instruction. Under the directive of February 18, the time to be devoted to advanced training was again increased to fifteen hours in four weeks of first pilot time, the absolute minimum considered necessary to develop proficiency as a "pilot of troop carrier and cargo gliders preparatory to rating as glider pilot." The objective of the program of instruction established February 26, 1943, also included the "preparation of students for service as junior officers or flight officers by necessary indoctrination in Military subjects, academic instruction in technical subjects, and maintenance of cargo gliders," and the "preparation of students for active combat service by necessary medical and physical training."[5]

The general plan for flying training was prescribed as:

	Hours		
	Dual	Solo	Total
1. Flying Training:			
Day	5:30	6:30	
Night	1:00	2:00	
			15:00

1. AAF 452.1, April 29, 1943.
2. Barringer, Flight without Power, 235, 236.
3. 1st Indorsement (AFRIT to CG,AAFFTC, March 1, 1943), AG,AAFFTC to CG,AAF, March 9, 1943, in AAFFTC Files.
4. AC/AS, Training to CG,AFTCC, April 24, 1943, in AAG 452.1, Gliders.
5. FTC Memorandum 50-4-1, Advanced Glider Training, Feb. 26, 1943.

	Hours Dual	Solo	Total
a. Take-offs, Fundamentals and Landings	1:00	1:00	
b. Air Work (High Tow)	1:00	1:00	
c. Traffic Patterns and Landings	1:00	3:00	
d. Descent on Tow	1:00	1:00	
e. Navigation Training		2:00	
f. Formation Flying	0:30	0:30	
g. Proficiency Check and Review	1:00	1:00	
			15:00

2. Minimums to be given are:

a. Dual	5 hours
b. Solo	7 hours
c. Total Flying	15 hours
d. Number of unassisted landings	20
e. Minimum day time before beginning night flying	4 hours

In more detail than previous instructional guides, this program recommended a breakdown of training, establishing minimum requirements and proficiency standards. On the flying line it was not rigidly followed, weather conditions, equipment, and instructor personnel dictating certain expedient changes.[6]

With the February 26 program as a guide and with many of the early difficulties attendant to glider training disappearing, the Lubbock school began to train glider pilots more adequately than heretofore. Conversations with glider personnel indicate that the fifteen-hour course was still considered too brief in that it only allowed the individual training of the glider pilot. Practically no time was available for "polishing" the glider pilot or for elementary tactical training. All flying was done with training type landing gear until they progressed to the operational phase. It is interesting to note in this connection that German glider pilot training reportedly requires a minimum of twenty starts and more than twenty hours flying in cargo gliders to secure a certificate comparable to graduation from Army Air Forces advanced training. In addition to this, to be fully qualified, the German glider pilot must win a further certificate, the attainment of which includes successful completion of blind flying, at least eight night flights, eight flights with full loading, and a number of cross-country flights.[7]

Gradually the training of glider pilots was undergoing significant changes as a result of further experimental and tactical work. Experiments in instrument towing of gliders indicated that the low tow position would be employed in some operations. Consequently, on May 4, 1943, the glider school was instructed to incorporate training in this position in its program of instruction.[8] This was done, one-half hour being given in day operations, and an equal time at night.[9] Another new training development dictated by tactical needs was the institution of landing from low approaches with minimum landing roll.

As a result of somewhat successful double towing tests with the C-60A airplane, the Flying Training Command was instructed to adopt double towing, at least on an experimental basis, at the glider school.[10] After experimentation at South Plains, it was reported that the double tow was considered impractical because:

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6. Ibid.
7. Detailed Interrogation Report on Glider Pilot captured at Chaoaut on May 8, 1943, Accession No. K-26105, Air Staff Intelligence Library.
8. AG,AAFFTC to CG,GCAFTC, May 4, 1943, in AAFFTC Files.
9. 2nd Indorsement (AG,AAFFTC to CG,GCAFTC, May 4, 1943), Asst. Director of Training, SPAFS, Lubbock, Texas, to CG,GCAFTC, May 27, 1943, in ibid.
10. AC/AS, Training to CG,AAFFTC, April 8, 1943, in ibid.

> During normal operations a student gets all the tow time necessary for this training. The primary requisite of a good glider pilot is extreme accuracy in landing which can only be attained by much landing practice. Inasmuch as the double tow takes more than double the amount of time required of a single tow, valuable landing practice will be sacrificed. A part of our curriculum calls for height releases, and as outlined above, forty minutes was necessary to tow the gliders to 7600 feet when experience has shown that a single tow can be carried to 9000 feet in fifteen minutes.[11]

For this reason, shortage of time, double tow training was not instituted until a subsequent revision increased the allotted hours.

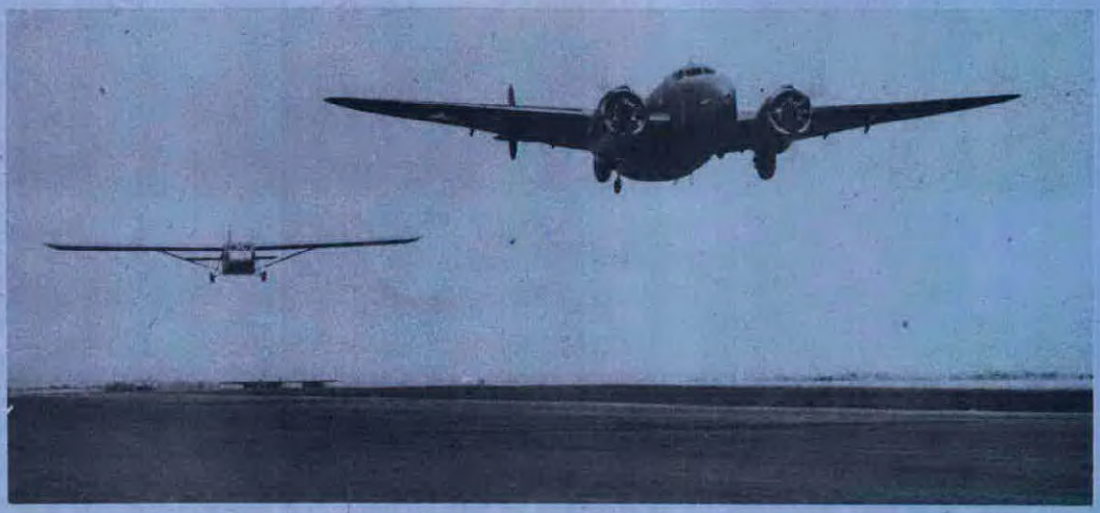
As the flight phase of advanced training was developing, so was the ground school. The prescribed number of hours had been greatly increased, corequisite with the policy of preparing the glider pilot for his eventual combat mission. The specified 105 hours were apportioned among 24 of military training, 47 of ground training, 24 of physical training, and 10 of line maintenance. Theoretically, ground training was broken down into 10 hours of map reading and navigation, 17 of code and blinker communications, 2 of cargo loading, 2 of glider concealment, and 16 of identification and tactical functions of aircraft.[12] The actual hours devoted to each of these were, of course, subject to the dictates of the previous training of the students and the availability of instructors and equipment.

Program of Instruction, Consolidated Glider Pool. The glider school at South Plains is also responsible for the training of the students consolidated in its central pool. Training is in accordance with the program of instruction established by the combined conference of February 8 and 9, 1943. This new program of instruction specified 556 hours of training. These hours are to be distributed on the following basis: basic military and officer training, 213 hours; ground phase of glider pilot training, 198 hours; medical training, 20 hours; physical training, 6 hours a week; combat team tactics, 135 hours; and 4 hours a month of flying training. This is by far the most comprehensive course yet established, as can be illustrated by a breakdown of the types of training. Basic military and officer training includes instruction in the articles of war, close order drill, scouting and patrol, ceremonies, inspections, orientation lectures, customs and courtesies of the military Service, honor indoctrination, leadership, personal affairs, interior guard duty, chemical warfare defense, War Department publications, safeguarding military information, military correspondence, and organization of the Army. The ground phase includes 80 hours of code practice with prescribed minimum proficiency of 6 words a minute, 20 hours of radio communications, 30 hours of weather, 48 hours of maps, charts and aerial photos, and 20 hours of equipment and maintenance training. Combat team tactics include 45 hours of guerrilla warfare, 20 hours of field sanitation, 30 hours of bivouac and instruction in small arms "subject to availability of suitable range facilities." Instruction in the Thompson submachine gun, .30 caliber rifle, .45 caliber automatic pistol, .30 caliber Browning machine gun, and knowledge of other ground arms is prescribed.[13]

The implementation of this instruction of the pooled students presented a serious problem because of the very nature of previous ground training programs. The students' past training history was extremely varied; many of them had received sufficient training in some phases, but their background was by no means identical. The lack of competent instructors and adequate training aids made it doubly difficult to effect the entire course; consequently, emphasis was laid on certain phases while others were almost completely omitted.

By June the ground pool course at Lubbock, with certain reservations, was considered adequate by instructor personnel. As most of the students had received a fair amount

11. 3rd Indorsement (AC/AS, Training to CG,AAFFTC, April 8, 1943), SPAFS, Lubbock, Texas, to CG,GCAFTC, May 13, 1943, in ibid.
12. FTC Memorandum No. 50-4-5, April 21, 1943.
13. FTC Memorandum No. 50-4-2, March 20, 1943, Program of Instruction for Glider Trainees Awaiting Training.



Lockheed C-60 takes off with CG-4A glider in tow.

Formation towing of combat gliders in echelon of three.

Gliders in formation release from tow plane and swoop down for landing.

As advanced training on tactical type gliders received the benefit of several months' experience, training became more standardized and pointed toward eventual operational employment. Slowly, developing combat tactics and techniques commenced to influence training.

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of basic military training, the hours and emphasis as prescribed in the program of instruction were changed. Lack of qualified instructors made it impossible to institute the entire course in guerrilla warfare; it was limited to unarmed defense and judo.[14] A well organized program of flying in light airplanes designed to maintain the flying proficiency of the pooled trainees was in operation at an auxiliary field.[15]

Glider Maintenance Course. Arrangements had been made with the Technical Training Command whereby every Thursday sixty-three students from the consolidated pool were ordered to Sheppard Field, Texas, for the glider maintenance course.[16] Early in January, 1943, in an effort to occupy more usefully the time of pooled glider trainees and to qualify them more adequately for field maintenance, Headquarters inquired into the practicability of ordering candidates on detached service to the Technical Training Command for the forty-day glider mechanic course.[17] Subsequently, on the nineteenth of January the Flying Training Command was directed to assign 100 students each ten days to Sheppard Field for this course.[18] Possibly due to subsequent disruption of the program, this was not carried out immediately, but by April this phase of the program was in full operation. The glider mechanic course, now increased to sixty-five days, proved to be an extremely valuable phase of the glider pilot's training, especially those ten days devoted to the crating, uncrating, and assembling of gliders, as such activity was one of the contemplated duties of the glider pilot in a theater of operations.[19] Due to the inclusion of this phase in the glider mechanic course, similar instruction was discontinued at the Advanced School.[20] On August 1, 1943, the Training Command[21] was instructed to reduce the glider mechanic course for glider pilots to thirty days' duration, with special emphasis on rigging and assembly of the CG-4A and the ability to supervise generally glider maintenance. Those trainees failing to complete this course successfully are now eliminated from further glider pilot training.[22]

On the whole, it would seem that the directing personnel of the Lubbock school have made a sincere effort to provide adequate instruction and occupation for the pooled trainees, improvising when necessary equipment was not available, writing their own texts, and instructing their own instructors.

Materiel Requirements. With the reduction of the glider pilot training objective, the Flying Training Command's acute materiel problem was at last solved. Only the problem of providing storage facilities for equipment not in use remained. Upon the closing of the Basic Glider Schools, it was planned to make TG-5, TG-6, and TG-8 gliders available to the C.A.A. War Training Service, as their parts were interchangeable with the liaison type planes being used by that agency.[23] The Command reported to Headquarters the numbers of excess basic gliders and liaison type planes available for disposition; however, in April as tentative plans were being formulated for the training of 2,000 glider pilots in 1944, the

14. 5th Indorsement (AC/AS, Training to CG,AAFFTC, May 7, 1943), Asst. AG,AAFFTC to CG,AAF, June 8, 1943, in AAFFTC Files.
15. 1st Indorsement (AC/AS, Training to CG,AAFFTC, May 7, 1943), AG,AAFFTC to CG,AAF, May 26, 1943, in ibid.
16. 3rd Indorsement (AC/AS, Training to CG,AAFFTC, May 7, 1943), CO,SPAFS, Lubbock, Texas, to CG,GCAFTC, May 22, 1943, in ibid.
17. R&R, AFRIT, Flying Training Section to AFRIT, Technical Training Section, Jan. 11, 1943, in AAG 353, Glider Training.
18. Daily Diary, AFRIT, Jan. 19, 1943.
19. AG,AAFFTC to AC/AS, Training, April 27, 1943, in AAG 352.11, Glider Schools.
20. AC/AS, Training to CG,AAFFTC, April 29, 1943, in 452.1 Gliders.
21. On July 7, 1943, the Flying Training Command and the Technical Training Command were consolidated in one organization, the Training Command.
22. AC/AS, Training to CG, Air Forces Training Command, Aug. 1, 1943, in AAG 353, Glider Training. (Air Forces Training Command hereinafter cited as AAFTC).
23. AFRIT to CG,AAFFTC, Feb. 25, 1943, in AAG 452.1, Gliders.

Command reported that it desired to retain 169 basic gliders and 274 liaison craft.[24] In July partial disposition occurred with release of all TG-1 and TG-1A gliders, TG gliders purchased from private owners, gliders in class 26 and on survey, and all winch and glider launching equipment to the Air Service Command for transfer to the Civil Aeronautics Administration.[25]

To effect the directive of February 18, 1943, 114 CG-4A gliders were required, but in order to provide for expected maintenance difficulties and attrition, the Command retained all its fifteen-place gliders.[26] There were 114 CG-4A gliders on hand in the Command, the number required for the tentative 1944 program;[27] therefore, further deliveries were discontinued.[28] The number of C-60 airplanes allocated to the Flying Training Command was supposedly adequate. It would seem, however, that the maintenance problem had not been completely solved. At present the difficulty of obtaining spare parts constitutes the principal problem, maintenance being performed by segregating a reserve of about four planes used solely for their parts.

Revision of Advanced Training Program. Glider Training by the Flying Training Command in the spring of 1943 was still primarily concerned with training glider pilots "in the safe and proficient operations of the CG-4A glider." Individual training did not logically develop into the tactical training by the Troop Carrier Command. Early in May the Commanding General of the Army Air Forces expressed his concern over this situation and directed that training methods be revised "so that our glider pilots are trained to perform their war-time mission and weaned away from the idea that they are going to land on airdromes." There seemed to be a general feeling in Headquarters that if this was to be done, there would have to be a revision of the "safety-first" and "preservation of materiel" policies.[29]

On July 9, 1943, the Office of the Special Assistant for the Glider Program acted to revise the advanced training program by directing the initiation of new training methods effective August 16, 1943. In order to increase the proficiency of graduates, special emphasis was to be laid on the "blitz" landing; "low approaches over simulated obstructions to a predetermined spot; precision spot landings, precision work. . . both on and off the runway, and at auxiliary fields; formation flying in echelon of two, including low approach, and spot landing in minimum area from such formations; proficiency in minimum altitude navigation; . . proficiency in flying conditions approaching maximum performance with full load;" and "precision night flying with full load."[30] It was realized that adequate proficiency in all of these could not possibly be secured within the fifteen hours now allotted to advanced training, so the Training Command was authorized to increase the number of flying hours to the maximum possible with available equipment, provided there was not a resultant decrease in the graduation rate.[31]

In accordance with this directive the Training Command established a new program of instruction for glider training effective August 16, 1943. Actual instruction, however, began a few days earlier. The ground program of instruction remains essentially the same, but the flight program represents the most radical revision yet promulgated. Throughout the advanced glider training program the number of hours devoted to advanced training on the tactical glider had suffered from the dictates of too large production quotas, abetted by a scarcity of gliders and tow planes. As has been shown, the individuals responsible for the proficiency of the glider pilots had always felt that fifteen hours' first pilot time was not sufficient to produce a fully qualified fifteen-place glider pilot. Finally, with this new program,

24. 1st Indorsement (AC/AS, Training to CG,AAFFTC, April 19, 1943), AAFFTC to AC/AS, Training, April 29, 1943, in AAFFTC Files.
25. AC/AS, Training to CG,AAFTC, July 22, 1943, in AAG 452.1 #2, Gliders.
26. R&R, AFRIT to AFROM, March 3, 1943, in AAG 452.1, Gliders.
27. R&R, AC/AS, Training to AC/AS, Operations, Commitments and Requirements, April 26, 1943, in ibid. (Operations, Commitments and Requirements hereinafter cited as OC&R.)
28. AC/AS, OC&R to AFASC, April 30, 1943, in ibid.
29. R&R, AC/AS, Training to AFSAG, May 7, 1943, in AAG 353, Glider Training.
30. AFSAG to CG,AAFTC, July 9, 1943, in AAG 353 A, Glider Training.
31. Ibid.

although the length of the course remains at one month, the prescribed hours of first pilot time have been increased from fifteen to twenty-five hours.

From an examination of the new program of instruction, it can be seen that the individual training of the glider pilot by the Training Command has taken a major step toward preparing the pilot for his "war-time mission." At last, slowly developing combat tactics and techniques are influencing the training program. The general plan of instruction is established as follows:

	Dual	Solo	
1. Transition to CG-4A Gliders	2	3	5
2. Tactical Type Landings	2-1/2	5-1/2	8
3. Night Flying (Formation and Landings)	2	4	6
4. Double Tow (Simulated Small Field Landings)	1		1
5. Formation and Tactical Landings (Over Obstacles)	1	1	2
6. Contour Cross-Country (Maximum altitude 200 feet)		2	2
7. Proficiency Check	1		1
8. Instrument (Link Trainer)		(5)	
Total Hours			25 32

For the first time special emphasis is placed on tactical type landings; all landings are now to be accomplished over a hurdle up to a simulated barrier with the glider fully loaded. With the increase in hours, double towing of the CG-4A glider, which was previously excluded due to time shortage, has been made a part of the advanced course. And now for the first time glider pilots are introduced to tactical type landing gear before proceeding to operational training. In order to graduate, they must satisfactorily accomplish at least one "tactical gear take-off and skid landing as pilot, co-pilot, or passenger."[33]

This new program has not yet been tested, and it remains to be seen whether these newly instituted training methods will produce a more polished and proficient glider pilot. The general feeling, however, among the individuals closely connected with the program is that at last the Training Command will be able to produce a graduate of a quality consistent with its capabilities and desires. Individual training will now develop more logically into tactical training. Further ideas, theories, and experimental developments are now brewing both in Washington and on the operational and training flying lines. It is possible that the near future may bring even a more radical revision of the glider training program.

Plans for 1944 Glider Program. Although there were enough glider pilot trainees in the South Plains consolidated pool to continue training through 1943, as early as April of that year, Headquarters began to make plans for the 1944 Glider Program. Throughout the spring and early summer considerable discussion occurred, the 1944 requirement being unofficially placed at 2,000 glider pilots, but a definite decision was not reached.[34]

During this period the Flying Training Command and the Office of the Assistant Chief of Air Staff, Training initiated action to alter the procurement basis for future trainees. Past and somewhat bitter experience had indicated that "power pilots became proficient as glider pilots after a very short transition, whereas glider pilots training as such do not seem to grasp the fundamentals of flying which is a vital factor in glider operation."[35] Consequently, on April 28 the Assistant Chief of Air Staff, Training recommended that the 1944 glider pilot quota be filled from graduates of the Advanced Pilot Schools. These power pilots

32. TC Memorandum No. 50-4-1, Aug. 1, 1943.
33. Ibid.
34. Memo for Col. J. H. Pool, AC/AS, Training by Capt. G. B. Ryan, AC/AS, Training, April 27, 1943, in AAG 211, Glider Pilots.
35. R&R, AC/AS, Training to AC/AS, OC&R, July 5, 1943, in AAG 353, Glider Training.

would be given fifteen hours on the CG-4A glider before assignment to the Troop Carrier Command. The reasons behind this recommended change were both sound and numerous. As has been stated, it had been found that after a few hours checking off, power pilots flew the CG-4A more proficiently than the graduates of the entire glider pilot training course.[36] The value of this argument was further enhanced by the cold financial fact "that the expense involved in training power pilots is less in time, money, and materiel than corresponding training of glider pilots."[37] Secondly, when the glider pilots progressed to the Troop Carrier Command, their utility and actual employment were comparatively limited. Moreover, that Command was faced with an acute shortage of power pilots and was forced to employ glider pilots as co-pilots on transport equipment. By producing a dually trained glider pilot, this situation could be alleviated. Furthermore, if in the future it should be proved that gliders were impractical for combat operations, power-trained glider pilots could be quickly transferred to other activities.[38]

Before a definite decision could be reached regarding the procurement basis, another question had to be determined, the pilot production rate for 1944. As the efficacy of the glider in combat operations remained to be proved, and as the ever-present threat that gliders might be done away with entirely necessarily influenced this decision, it was indeed a difficult problem. At one time it was decided that the 1944 glider production program would be the basis for future glider pilot trainee quotas.[39] This was later supplanted by a War Department, Operations Division estimate based on the number of airborne divisions to be activated during the calendar year 1944.[40] This would indeed seem to be the most logical basis for glider pilot trainee quotas--former mass production without regard to the established troop basis having produced confusion and a resultant disposition of excess personnel.

The 1944 Glider Program. Finally, on August 21, 1943, the 1944 requirements for graduate glider pilots were transmitted to the Training Command. Glider pilot production quotas are established at 200 a month. The new procurement basis represents a compromise between the former method and the belief that a glider pilot must be a qualified power pilot. Candidates must be volunteers, eighteen to thirty-seven years of age, and physically qualified in Class I or Class II. They must be enlisted men of the Army of the United States on duty with the Army Air Forces and must have completed their basic military training. Significantly, they "must have successfully completed instructor phase of CAA War Training Service course; or present evidence of previous pilot time in such number of hours and on such equipment as determined by your command." Aviation cadets eliminated from advanced pilot training will be eligible if they are recommended by the faculty board. In an effort to secure personnel with a definite aptitude for flying, "no personnel will be selected . . . who have been eliminated from any course of pilot training for lack of inherent pilot ability, dangerous flying characteristics or fear of flying." It is hoped that the disbandment of the C.A.A. War Training Service will provide a number of trainees. Instructor graduates of that course are to be given an opportunity to volunteer for glider training before entering the Central Instructors School.[41]

As previously, enlisted men are to be classed as aviation students and receive the grade of staff sergeant upon entering training. Graduates will be appointed second lieutenants or flight officers, rated as glider pilots, and assigned to the Troop Carrier Command.

The 1944 directive also establishes a general course of instruction, the details being left to the discretion of the Training Command. Candidates are to be given a power pilot course in primary or liaison type airplanes, and a course in the maintenance, rigging, and

36. R&R, AC/AS, Training to AC/AS, OC&R and AFSAG, April 28, 1943, in AC/AS, Training Files.
37. R&R, AC/AS, Training to AC/AS, OC&R, July 5, 1943, in AAG 353, Glider Training.
38. R&R, AC/AS, Training to AC/AS, OC&R and AFSAG, April 28, 1943, in AC/AS, Training Files.
39. Memo for AC/AS, Operations Division by AFSAG, June 26, 1943, in AAG 452.1 #2, Gliders. (Operations Division hereinafter cited as OPD.)
40. AC/AS, Training to AC/AS, OC&R, July 5, 1943, in AAG 353, Glider Training. See Appendix C.
41. AC/AS, Training to CG,AAFTC, Aug. 21, 1943, in AFIHD Files.

assembly of the CG-4A glider. The directive also prescribes a basic stage of "familiarization with glider operations and the handling of extremely light wing loadings on training type gliders." The establishment of this phase of instruction, however, rests on the decision of the Training Command. The advanced course is to be similar to that now in operation. An appropriate ground course will supplement each phase of training.[42]

The Training Command now has several months to determine the details of the new glider pilot training program. Two and one-half years of experimentation in training methods and the recent development of tactical requirements, coupled with a steady flow of more adequately qualified trainees and a sufficiency of materiel, should produce a more standardized, coordinated, and productive training program. The advanced phase has at last been accorded the time believed required, but the other controversial question, the worth of the basic training glider, remains to be determined.

Measurement of Production. Two and one-half years of training experimentation and development have noticeably increased the quality of the Training Command glider pilot graduate. Quantitatively, the production total is not a true measurement of the effort and labor that have gone into glider pilot training. As of July 31, 1943, 3,081 students had been graduated from advanced training and rated as glider pilots.[43] The shifting objective in force throughout 1943, however, had effected the partial training of many more candidates. Up to the disbandment of the Elementary and Basic Schools in March, 1943, 8,520 students had graduated from the elementary and 6,760 from the basic stage.[44] Training throughout the remainder of the calendar year 1943 should produce an additional 1,000 glider pilots,[45] while 1944 production quotas contemplate another 2,400.[46]

Naturally, the rapid establishment and execution of a hitherto untried type of training was achieved at a great financial as well as error cost. The training of the glider pilot has yet to undergo conbat test, but individual training is now receiving the benefit of tactical procedure development. With comparative standardization of the many training variables, it is hoped that both quality and quantity production will achieve their maximum potentialities.

Summary. The revision of Eebruary 18, 1943, resulted in a singular alteration of the character of the glider pilot training program. Training effort was concentrated in the advanced stage, and the decrease in obstructions to its proper accomplishment enabled the training agencies to focus on its development and improvement. In no other period did the advanced, or any other training phase, undergo so many beneficial changes. Consciousness of the combat mission of the glider pilot, his relative position in the conduct of airborne operations, and the development of tactics and techniques in operational training all united to produce significant modifications and necessary innovations. For the first time coordinated planning of a future program was accomplished. The individual training of the glider pilot at last achieved a position from which it could operate on a plane comparable with the other training functions of the Air Forces.

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42. Ibid.
43. Consolidated Flying Training Report, July, 1943, in AFIHD Files. See Appendix A.
44. Ibid., March, 1943, in ibid.
45. AAFTC Condensed Flow Charts, Aircrew Training, Aug. 1, 1943, in ibid.
46. AC/AS, Training to CG,AAFTC, Aug. 21, 1943, in ibid.

Chapter XI

THE OPERATIONAL TRAINING OF THE GLIDER PILOT

Plans for Operational Training. The tactical employment of gliders had been developed only by the Germans and to some extent experimentally by the British; therefore, it remained for the United States Army, while concentrating on a global war and the tremendous expansion incident to its execution, to develop its own techniques for the employment of the glider echelon of an airborne division. Tentative thinking and planning had been going on ever since the inauguration of the first experimental program, but as not one of the individuals responsible for its progress, or anyone for that matter, knew what the actual military characteristics of the cargo glider would be, nothing of definite or permanent value could be accomplished.

After the Flying Training Command had completed the individual training of the glider pilots, it was planned that they would receive operational training in conjunction with airborne troops. Such operational training would be a combined function of the Ground and Air Arms. The Infantry troops would be furnished by the Airborne Command of the Army Ground Forces, while the Air Forces would furnish the transport units equipped with gliders and staffed by Air Forces personnel. This dual responsibility and the attendant difficulties of command and communication channels is perhaps one of the reasons for the subsequent delay and confusion in the formation of glider employment techniques and the operational training of glider pilots.

Administration of Operational Training. Actual organization for the performance of this transport function did not exist until June, 1942, when the Air Transport Command was established to "supervise and conduct the organiza/tion/ and training of air transport units . . . with special initial emphasis on . . . such units for the movement of air landing and equipment including glider-borne troops, and parachute troops and equipment."[1] On June 20 the Air Transport Command was renamed the Troop Carrier Command, but it retained the same functions held under its former name.[2] The Headquarters of the new Command were established at Stout Field, Indiana, under the command of Colonel Fred S. Borum, later promoted to brigadier general. Other tactical stations were also established.[3]

The first work of the Troop Carrier Command with gliders occurred during the training of the sixty Flying Training Command glider instructors at Lockbourne, Ohio, and in the subsequent towing operations conducted by two Troop Carrier groups at the Advanced Glider Schools in the fall and winter of 1942. It was not until late 1942 when graduates of the Flying Training Command Advanced Glider Schools commenced to flow to the Troop Carrier Command, that the Command began to make preparations to receive and train them. Thus the Command was faced with the necessity of developing an operational training program for glider pilots. Moreover, as it was a comparatively new organization, the doctrine for the tactical employment of Troop Carrier units had to be developed under the direction of the Director of Air Support and later, after the March 29, 1943, reorganization, under the Assistant Chief of the Air Staff, Operations, Commitments, and Requirements and the Special Assistant for the Glider Program.

The mission of Troop Carrier units was evolved as:

> Troop Carrier units are combat units, organized, equipped and trained for tactical employment as combat carriers in active operations in combat zones of theaters. Their principal function is to

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1. AAF Reg. 20-1, June 16, 1942.
2. Hq. AAF, G.O. No. 8, June 20, 1942.
3. WD Press Release, July 18, 1943.

> carry combat troops and auxiliary combat equipment to effecitve locations in combat zones from which to begin effective combat operations. Their secondary mission is to maintain combat supply and resupply to units in the combat zone by distribution of air service and other supplies from Air Transport and other fixed bases to advanced landing areas in combat zones and to evacuate casualties and other personnel and materiel from combat zones.[4]

Thus the mission of the I Troop Carrier Command in the continental United States was to supervise and conduct the training of these units which provided for the air movement of troops and equipment, including glider-borne troops.[5]

Availability of Materiel. But before operational training could get underway, the proper disposition of available tow planes and gliders had to be determined. During the summer of 1942, quantity delivery of fifteen-place gliders was expected by that fall. Consequently, the Army Ground Forces commenced to evolve plans for the training of the glider echelons of two airborne divisions, the 82nd and the 101st.[6] But in August a difficult problem developed regarding the availability of Troop Carrier groups. Originally, eight of the ten Troop Carrier groups scheduled for activation during 1942 had been committed to the United Kingdom by October 1, 1942.[7] On August 18, however, a decision of the Deputy Chief of Staff deferred the movement of three of these groups.[8] A total of five groups was now available in the United States, but these had to be divided equitably between the Troop Carrier Command, the Flying Training Command, and the Airborne Command to effect transport pilot transition training, glider pilot training, and airborne tactical training. Naturally, each Command desired to have the requisite number of Troop Carrier Groups to accomplish its particular phase of training, and throughout August and September considerable controversy occurred in Headquarters relative to the disposition of these groups. Two groups had already been allocated to the Flying Training Command to effectuate its advanced training, but these were to be withdrawn early in 1943 as C-60 airplanes became available. Finally, on September 19, 1942, it was decided that one group would be given to the Airborne Command after October 31, another after November 30, and a third after January 31, 1943. The group allotted to the Troop Carrier Command would also be used in combined training with the Airborne Command.[9]

But the question of the glider echelon was not solved. Troop Carrier Group Tables of Organization provided for thirty-eight CG-4A gliders for each squadron,[10] but fifteen-place glider production at this time would not by any means meet these requirements. As training by the Flying Training Command was granted first priority, it was decided that the first 156 gliders would be delivered to that Command and the next 208 to the Airborne Command.[11] Gradually during the early months of 1943 the Troop Carrier groups began to receive their assigned gliders.

Operational Training Program. On September 1, 1942, the Troop Carrier Command published a comprehensive training directive. Gliders, however, had not yet been assigned to Troop Carrier units; therefore, glider operating procedures and tactics had not been developed. It was planned that as soon as gliders were received and experience had been gained in their operation, glider pilots would "engage in operational training during the advanced training period of the power pilots so that Troop Carrier Squadrons may move into

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4. CG, I TCC to AC/S, OPD, Jan. 17, 1943, in AAG 322, Airborne Command and Troop Carrier Command.
5. CG, I TCC to AC/S, OPD, Jan. 22, 1943, in ibid.
6. Memo for Chief of Staff, Attn: G-3, through CG,AAF by CG,AGF, Aug. 16, 1942, in AAG 452.1 B, Gliders.
7. Memo for G-3 through CG,AGF and AC/S, OPD by AC/AS, Plans, Aug. 30, 1942, in AAG 353.9 F, Training General.
8. Memo for CG,AAF by G-3, Aug. 21, 1942, in AAG 353.9 E, Training General.
9. Memo for CG,AAF and CG,AGF, Sept. 19, 1942, in AAG 353.9 F, Training General.
10. WDGS D/F, G-3 to CG,AAF, Aug. 26, 1942, in ibid.
11. Memo for CG,AAF by AC/S, OPD, Sept. 26, 1942, in AAG 321.9-3, Groups.

the air borne maneuvers are complete with pilots, planes, glider pilots and gliders for co-operation in the training of the Air Borne Command."[12]

Another Troop Carrier training directive appeared December 10, 1942, and on January 5, 1943, a supplement to this directive established the training methods for Troop Carrier glider pilots. This directive was in accordance with the necessary qualifications and proficiencies for Troop Carrier units and crews prescribed by Headquarters.[13] An eight-hour tactical glider flying course was established, all flying to be accomplished with a gross load. Two hours were to be devoted to a cross-country flight of one hour's duration with release at 5,000 feet and landing at a strange airport. A second two hours were allotted to straight in approaches with release at 200 feet and landings both up and down wind. Another two hours were specified for 90° approaches and accuracy landings from 400 feet both up and down wind. The last two hours were to be devoted to correct take-off methods, up and down wind, and 90° approach accuracy landings with stress on the correct use of spoilers, and correct method of dispersing aircraft if the landing point was misjudged.

A seven-hour ground school course was also established. One hour was to be devoted to the study of the nylon towrope and the towline release mechanism, two hours to instruction in glider ground handling, and another hour to the study of the duties of the ground crew. An additional two hours were to be given to a glider cockpit check to include instruction in the correct method of checking the glider before flight and the responsibilities of the glider pilot. The final two hours were allotted to the correct methods of loading the glider. The program of instruction also included information on instructions for the tow ship pilot, tow ship operation, emergency operations and procedures, glider pilot pre-flight check list, glider operation, the mooring of the CG-4A glider, tactical glider operation, and characteristics of the CG-4A glider.[14]

Status of Operational Training. As each new Troop Carrier group was activated during the winter of 1942-1943, glider pilots, 108 to a group, began to arrive at the tactical stations of the Troop Carrier Command. These pilots, fresh from graduation from the Flying Training Command, were to be given operational training. Thus the Troop Carrier Command found itself faced with a tremendous problem. Its groups were still being organized; they were short necessary personnel and often did not have their full complement of planes. For this reason, coupled with the fact that the groups were primarily concerned with giving the transport pilots sufficient flying training, towing operations were at a minimum. Slowly, adequate numbers of gliders began to arrive, but throughout the period a large number of them remained grounded. This was due to several factors, primarily the difficulty in obtaining spare parts in order to keep the gliders flyable. In most cases this was accomplished by robbing one glider to repair another. The glider pilots had virtually no occupation, and, consequently, morale plummeted to a new low ebb. In some cases the glider pilots did not achieve enough flying time to receive their flying pay, it being necessary to transfer them to training stations to obtain flying time on liaison planes.[15] During March and April glider training was further hindered by the assignment of many of the gliders to special maneuvers, the necessity for diverting Troop Carrier squadrons for parachute training, and the curtailment of flying due to the shortage of 100 octane gasoline.[16]

Personnel Problems. The serious morale situation, coupled with the fact that glider pilots were being assigned to the Troop Carrier Command more rapidly than they could be absorbed on the activation basis of one group a month, necessitated an effective and immediate remedy. In March, therefore, action was initiated in Headquarters to reclassify commissioned glider pilots. It was hoped that this would solve the excess personnel problem

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12. Training Directive, I Troop Carrier Command, Sept. 1, 1942.
13. AAF Training Standard No. 30-2-1, Dec. 1, 1942.
14. Supplement Number I to First Troop Carrier Command Training Directive, dated Dec. 10, 1942, Jan. 5, 1943.
15. Maj. R. S. Gibbs, Field Inspector, to CG,AAF, April 23,1943, in AAG 353.01 A, Training Programs.
16. AG, I TCC to AC/AS, Training, June 5, 1943, in AAG 353 A, Glider Training.

and serve to raise morale by alleviating promotion stagnation. Troop Carrier Squadron Tables of Organization provide for one first lieutenant, one second lieutenant, and twenty-seven flight officer glider pilots for each squadron. Many officers had applied for glider pilot training in the belief that they would receive rapid promotion. They had undergone a long period of training without promotion, and there was now little hope of advancement under existing Tables of Organization. The only other positions open to glider pilots were one captain, S-3 in Troop Carrier Group Headquarters, and one major in A-3 of General Headquarters.[17]

The Troop Carrier Command groups, however, were operating with a shortage of staff and administrative officers. There were some glider pilot officers naturally fitted to fill these positions. Consequently, conteraction was initiated in Headquarters, and it was decided that it was not necessary to reclassify glider pilots but that they should fill these vacancies, as rated pilots can maintain their flying status while in administrative positions.[18] In this manner both glider pilots and the Troop Carrier Command benefited.

Establishment of Glider Pilot Combat Training Unit. As the Flying Training Command was graduating glider pilots more rapidly than they could be effectively employed by the Troop Carrier Command, the board of officers appointed February 11, 1943, to determine the 1943 Army Glider Program had ruled that the Troop Carrier Command should "set up a school for glider pilot graduates that may be accumulated within the command."[19] During March the Troop Carrier Command commenced to effect this directive, and on April 5, 1943, the Glider Pilot Combat Training Unit was established at Bowman Field, Kentucky. All glider pilots received from the Flying Training Command are now assigned to this unit and receive an intensive course in basic military subjects, thereby better preparing them to serve as commissioned or flight officers in Troop Carrier tactical squadrons.[20]

The establishment of such a unit, necessarily of a large size, required an organization distinct from the station complement.[21] The Troop Carrier Command, therefore, organized the Glider Pilot Combat Training Unit

> to be operated by a Training Headquarters, consisting of an officer in charge of training, assisted by an officer in charge of ground training and an officer in charge of technical training. The glider pilots will be assigned to squadrons of 200 men each, each squadron containing four flights. Each squadron will be assigned to a Provisional Group Headquarters, which in turn reports to the Commanding Officer of the Glider Pilot Combat Training Unit. All squadron and group executive and administrative positions are filled by members of the Glider Pilot component who are qualified for such duty. All flight leaders, drill instructors, engineering officers and other supervisory positions will be filled by glider pilots whose previous military experience qualify /sic/ them for such duty.[22]

Graduate glider pilots are now flowing to the Troop Carrier Command at the rate of 250 a month, to continue through November, 1943, for a total of 2,000. As this number exceeds the requirements of Troop Carrier units now in the United States and those scheduled for activation during 1943, it was decided to employ the excess for loss replacements and for

17. AFRIT to AFRAS, AC/AS, Program Planning, AS/AS, A-1, AFPMP, March 17, 1943, in AAG 211, Glider Pilots.
18. AC/AS, Training to CG,AFTCC, June 4, 1943, in AAG 211 A, Pilots.
19. Board Report on Recommendations for Army Glider Program, Feb. 11, 1943, in AAG 452.1, Gliders.
20. 1st Indorsement (AFRAS to CG,AFTCC, March 28, 1943), AG,AFTCC to AFRAS, March 31, 1943, in AAG 221 #2, Pilots.
21. CG,AFTCC to AC/AS, Training, April 22, 1943, in AAG 320.4 #2, Manning Tables.
22. 1st Indorsement (AFRAS to CG,AFTCC, March 28, 1943), AG,AFTCC to AFRAS, March 31, 1943, in AAG 221 #2, Pilots.

supply of glider personnel to the Troop Carrier units previously shipped overseas without their glider echelon.[23]

Program of Instruction, Glider Pilot Combat Training Unit. The extremely varied past training history of the glider pilots assigned to this unit made it very difficult for the Troop Carrier Command to establish a detailed program of instruction. Therefore, the full responsibility for training each individual member "to the highest possible state of proficiency in the performance of the mission assigned" devolved upon the commandant of the Glider Pilot Combat Training Unit.[24] With the comparatively small staff assigned to him, the commandant set about establishing the methods to produce a glider pilot who was not only a precision flyer but a tough soldier--a man capable of matching or surpassing the much vaunted paratrooper.

It would seem that when the glider pilots reached the combat training unit, their mental attitude, a result of months of waiting, shifting, and disappointment, precluded their being competent soldiers. Many of them, not having received any extensive military training, were without the military qualifications necessary for an officer. In addition, the extensive procurement basis employed in the summer of 1942 and the attempt of the Flying Training Command to meet too large production quotas had resulted in the graduation of a number of men who under other circumstances would have been eliminated on the basis of improper individual attitude or the lack of flying ability.

The program of instruction established for the Glider Pilot Combat Training Unit, therefore, had as its objective the production of a precision pilot, a tough soldier, and an officer. Its duration was established at five months, and training was divided into three phases, military, technical, and flight. As the commandant was to supplement and change this guide in the light of varying conditions and circumstances, the number of hours to be devoted to each type of training was not prescribed. It was hoped that this instruction, rigorous enough to eliminate those who did not possess the requisite attitudes or flying aptitude, would accomplish its mission:

1. Attainment of a high proficiency of physical endurance of the individual.
2. Attainment of a high state of skill and proficiency as pilot of cargo gliders.
3. Attainment of a high degree of individual proficiency as a ground soldier.
4. Attainment of a high state of morale of personnel assigned to the unit for training.[25]

The military training, the most extensive yet prescribed, was to include physical training, close order drill, military courtesy and discipline, Air Force and Troop Carrier organization, care of clothing and equipment, military sanitation and first aid, marches and bivouacs, arctic, tropical, and desert operations, interior guard duty, and defense against the chemical attack. It was also to include individual defense against air and mechanized attack, camouflage, map reading and compass marching, inspections, aircraft identification, and airdrome defense. Training in weapons and marksmanship was to be conducted with the objective of obtaining the highest possible degree of proficiency in the use and care of .30 caliber carbine, .45 caliber submachine gun, .45 caliber automatic pistol, 12 gauge shotgun, .30 caliber rifle, and the .30 caliber machine gun, .50 caliber machine gun, 60-mm mortar, and 81-mm mortar if practicable.

Technical training was to be continuous throughout the five months; instruction was to be given in both operation and repair within the scope of technical regulations. When sufficient equipment was not available, improvised methods were to be employed. It was

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23. AC/AS, Training to CG,AFTCC, April 13, 1943, in AAG 353 A, Glider Training.
24. Training Directive, Glider Pilot Combat Training Unit, April 27, 1943.
25. Ibid.

Glider Infantry take off for a combat mission.

Glider lands; infantry and glider pilots ready for attack.

Glider pilots train for chemical warfare.

Throughout the glider program there was a growing realization of the need for training the glider pilot for his combat role after the glider had completed its transport mission. Intensive ground combat instruction was added both to the individual and unit phases of training. The glider pilot is a tough ground soldier as well as a proficient pilot.

suggested that technical training include all phases of the operation, maintenance, and structure of liaison type airplanes, their engines, and gliders. Intensive communications and weather training was also prescribed.

Flight training was to be given in both gliders and liaison type planes. The glider pilot training was specified as that set forth in the Troop Carrier Command program of instruction of January 5, 1943.[26] As the theories for the tactical employment of gliders were being developed, it became evident that in combat operations gliders would have to be landed in small fields, often at night. Consequently, the Troop Carrier Command is making a special effort to perfect the glider pilot's technique

> in slow landings, spot landings, and formation approaches. They are also being taught to fly in a much higher tow position than used in their original training in the CG-4A glider. Restricted small fields bound by obstacles consisting of cloth strips hanging on ropes suspended between light poles have been constructed on the bases in which glider training is being practiced and all glider pilots are being given training in landing on small fields. The glider pilots were taught to land at 100 to 110 m.p.h., and it requires considerable time to change this technique to slow landing at approximately 50 m.p.h. . . .[27]

Supplementary to glider training "for the purpose of maintaining pilot proficiency and qualifying rated glider pilots for flight pay" training was to be given in liaison type craft.[28] It is generally felt that past experience has demonstrated that a man who cannot fly a plane properly cannot pilot a glider with the precision necessary for tactical operations. Therefore, for two hours every day glider pilots are given flying in liaison type aircraft. They are required to fly a special pattern making a three-point landing to a precision mark. Their performance must be absolutely perfect, both day and night.

Plans for Future Troop Carrier Training. After the glider pilots have completed this five-month training course at Bowman Field, plans are now being made, in compliance with an oral directive from General Arnold, to transfer them to an Advanced Glider Training Base to be located at Raleigh-Durham, North Carolina.[29] From conversations with glider personnel, it is contemplated that here the glider pilots will be given an intensive thirty-day training course of twenty-five to thirty hours of combat training on the CG-4A glider or any other craft that may in the future be employed for combat operations. It is planned that this training will simulate as closely as possible combat maneuvers--as these maneuvers are developed.

After completion of the course at the Advanced Training Base, it is planned that the glider pilots will be transferred to Troop Carrier tactical units about ten days before these units enter intensive combined combat training with the Airborne Command. This training is to last about two months prior to overseas commitment of the Troop Carrier units.

Summary. Troop Carrier Command operational glider training from the date of its effectuation to the present time has been characterized by a period of experiment and development similar to that undergone by individual training. There first existed a phase when glider training was hindered by a lack of tow planes and gliders, inadequate knowledge of glider procedure, and personnel problems. Then there followed a time of development of training methods and procedures. With the establishment and effective operation of the Glider Pilot Combat Training Unit, training became more standardized and comprehensive. It is still developing and expanding. In the planned establishment of the Advanced Glider Training Base an agency will be created to provide more effective utilization of new combat tactics and techniques.

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26. Ibid.
27. 1st Indorsement (AFSAG to CG,AFTCC, June 26, 1943), AG,AFTCC to AFSAG, July 6, 1943, in AAG 354.2, Maneuvers.
28. Training Directive, Glider Pilot Combat Training Unit, April 27, 1943.
29. R&R, AC/AS, Training to AC/AS, MM&D, Aug. 17, 1943, in AFIHD Files.

Chapter XII

TACTICAL TESTING AND EMPLOYMENT

Status of the Glider. Now that the Army Air Forces glider program had been in operation for two years, gliders procured, glider pilots individually trained, and an operational training procedure established, it remained for the worth of the glider as a tactical weapon to be established conclusively. Throughout 1943 the agencies and individuals chiefly concerned were working toward this end.

First Tactical Employment. In the fall of 1942 when the combat glider first commenced to come off the production lines, its tactical potentialities were unknown. Consequently, both the Air Forces and the Ground Forces desired to experiment with gliders in employment with airborne troops as soon as possible. To this end, arrangements were made to send the 14th Troop Carrier Squadron equipped with fifteen CG-4A's to San Antonio, Texas,[1] for the maneuvers of the Second Division which was being trained for airborne operations.[2] These maneuvers, October 30 and 31, 1942, marked the first employment of the fifteen-place glider for other than training purposes. The gliders were used only for resupply from Stinson Field, San Antonio, to Del Rio, Texas. The demonstration was regarded as "completely successful, except for the glider loading ramps and their attachment fittings."[3]

Maneuvers of 101st Airborne Division. During the maneuvers of the 101st Airborne Division the week of May 23, 1943, in the vicinity of Kershaw, South Carolina, the CG-4A glider received its first real tactical test. The 50th Troop Carrier Wing, composed of the 403rd, 375th, and 63rd Troop Carrier Groups, provided the transport. In the maneuvers parachute Infantry, Field Artillery, and Anti-Aircraft were first employed. Gliders then landed Infantry, Anti-Aircraft, Engineers, and Field Artillery.[4]

From the point of view of the Air Forces, the primary purpose of these maneuvers was to determine, if possible, the tactical value of the glider. It was also hoped that the effectiveness of airborne attack, the proficiency of glider personnel, and the effectiveness of the tactics and techniques that had been developed by the Troop Carrier and Airborne Commands would be determined. It would seem, however, that personnel closely connected with the glider program were somewhat disappointed in the results of the maneuver, feeling that it failed to demonstrate conclusively the tactical effectiveness of the CG-4A glider.[5]

In the maneuvers certain glaring tactical errors occurred. The tug airplanes and their gliders flew in at a low altitude and at low speed over enemy territory, attempting neither evasive action nor avoidance of areas where antiaircraft obviously would be concentrated.[6] The maneuvers, however, did demonstrate that the CG-4A glider can be landed in any reasonably small, open area without serious damage to personnel or equipment. The gliders were flown into bushes, scrub oaks, and barbed-wire fences with only minor damage resulting.[7]

As this was the first time that gliders had been extensively employed as a component part of an airborne division, some confusion and misjudgment were to be expected. It would appear that staff planning for these new and untried operations was not entirely adequate. Nevertheless, senior Air Forces personnel attending the maneuvers seemed to feel, "without commenting on the tactical situation," that the demonstration imparted "great confidence in our glider pilots, in the gliders themselves, and in their being able to carry out tasks as-

1. Memo for C/AS by AFRAS, Oct. 5, 1942, in AAG 452.1, Gliders.
2. Daily Diary, AFDMR, Oct. 12, 1942, in AAG 319.1, Daily Diary.
3. Daily Diary, AAFFTC, Nov. 6, 1942.
4. AC/AS, Training to AC/AS, OC&R, May 21, 1943, in AAG 354.2, Maneuvers.
5. AFSAG to CG,AAF, June 4, 1943, in ibid.
6. AC/AS, OC&R to CG,AFTCC. May 31, 1943, in ibid.
7. AFSAG to CG,AAF, June 4, 1943, in ibid.

signed to them."[8] But to personnel more closely connected with the satisfactory execution of the glider program, the maneuvers pointed out one important deficiency; the absolute coordination necessary for successful airborne operations was not yet being attained in Troop Carrier training.[9]

It would seem that the success of the glider operation was impaired to some extent by the traditional lack of understanding and cooperation between the Air and Ground Arms, a certain distrust in the proficiency of the glider pilots and the safety of the gliders existing among the airborne officers. As has been demonstrated, the champions of the glider program continually have had to contest this somewhat clandestine feeling among both Air and Ground personnel. Gradually, however, this unfavorable attitude seems to be decreasing, confidence in the worth and eventual successful tactical employment of the glider becoming manifest in Army thinking.

Plans for Conclusive Demonstration. As the May airborne maneuvers had by no means successfully demonstrated the tactical possibilities of the glider, it became increasingly apparent that its potential value must be vindicated. A few individuals, notably in the Office of the Special Assistant for the Glider Program, were convinced that its worth could be demonstrated after a short period of intensive training under proper supervision.

In June plans for such a demonstration were initiated in the Office of the Special Assistant for the Glider Program. It was decided that the personnel and equipment of the I Troop Carrier Command would be employed, but that the Office of the Special Assistant for the Glider Program would exercise strict supervision. The plan was coordinated with the Assistant Chief of Air Staff, Training, and on June 21 a conference with the Commanding General and Chief of Staff of the Troop Carrier Command implemented the plans for the demonstration. The 38th Troop Carrier Squadron with its normal glider echelon and forty of the best glider pilots from the pool at Bowman Field were ordered to Laurinburg-Maxton, North Carolina, the site selected for the training and the maneuvers. Major Michael C. Murphy was delegated to supervise training, while Colonel P. E. Gabel, Office of the Special Assistant for the Glider Program, assumed comprehensive supervisory functions.[10]

The purpose of the demonstration and its preparatory intensive training was to determine the "full capabilities" of the CG-4A glider and to train the pilot personnel "to a high state of proficiency in the tactics and technique of tactical glider operation." Although airborne troops were to participate in the demonstration and the Airborne Command was to assist in establishing tactics and techniques, the actual determination of the glider operations was to be an Air Forces function. It was directed that intensive individual and unit training be carried out. In individual training special emphasis was to be placed on development of mutual understanding between the tug and glider pilots, extreme accuracy landings in small fields over obstacles, and the determination of methods of landing gliders on all types of terrain. Unit training was to attain the highest possible degree of proficiency in glider formations, low altitude navigation, and unit operations on all types of terrain.[11]

Laurinburg-Maxton Demonstration. Throughout July intensive training was carried out in the Laurinburg-Maxton area. The Flying Training Command sent nine C-60's with crews and glider pilots for a period of two weeks, while two officers from the School of Applied Tactics and a representative of the Air Service Command were present throughout the period.[12] During the training an attempt was made to achieve a standardized glider operating procedure. A limited number of glider pilots, as a system of progressive elimination was employed, became highly proficient in glider tactics as they were developed. In the determination of the possibilities of the CG-4A, all types of maneuvers were practiced and perfected. As had been directed, special emphasis was placed on landings on all types

8. AC/AS, OC&R to CG,AFTCC, May 28, 1943, in ibid.
9. AC/AS, Training to AFSAG, June 14, 1943, in ibid.
10. Memo for General Arnold by AFSAG, Aug. 18, 1943, in AFIHD Files.
11. AFSAG to Maj. M. C. Murphy, June 22, 1943, in AAG 353, Glider Training.
12. Memo for Gen. Arnold by AFSAG, Aug. 18, 1943, in AFIHD Files.

of terrain. A significant development occurred in the successful demonstration of the ability of the CG-4A to land on water. Water landings were made with both an unmodified and a specially prepared glider, the latter proving completely successful.[13] Landings up to and over obstacles, pattern landings, and precision landings were carried out. CG-4A pickups were also employed, demonstrating that once a glider has completed its tactical mission with a small field landing it can be easily salvaged for future use without the expense and effort attendant to removing it to a proper take-off point by ground transportation. B-17 single and double tows were also employed.

The period of training climaxed with a tactical glider demonstration on August 4 and 5, 1943, with senior Air and Ground Forces personnel and members of the press in attendance. As the purpose was to illustrate as perfectly as possible the potentialities of the CG-4A, the area employed was smaller than would be used under normal combat conditions and many artificial conditions were injected. The small number of highly trained glider pilots and tow crews demonstrated the employment of various types of tows; training gear, tactical gear, and skid landings; accuracy and formation landings in a restricted area;[14] acrobatics with the CG-4A in free flight; and a water landing. There was also a ground display of glider equipment and a dramatically effective night demonstration.[15] It is generally felt that the tactical potentialities of the CG-4A were superbly demonstrated. The pilots trained in these maneuvers will now form a nucleus of superior instructors for future unit training, and it is hoped that by this means all pilots and crews can be brought to an equally high state of proficiency.

Glider instruction has always operated without the benefit of adequate texts. In July it was recommended that a glider manual treating developing combat tactics and techniques be written.[16] The preliminary research on the manual was accomplished by members of the staff of the School of Applied Tactics at the Laurinburg-Maxton maneuvers, and the writing of this manual is now in progress.[17] It is hoped that the development of an adequate text covering all phases of tactical glider procedure will answer an acute operational and individual training need--the eternal training question, What is the eventual tactical mission of the glider pilot?

Refinement of the CG-4A. Concurrent with the evolution of combat tactics and techniques, there has been materiel development and refinement of the glider. A certain amount of distrust in and dissatisfaction with the flying characteristics and potential tactical effectiveness of the CG-4A glider has been expressed by personnel of both the Air and Ground Arms. Unfavorable publicity, such as that occasioned by the August glider crash at St. Louis, has served to augment this feeling. But development and refinement of the CG-4A is continuing, several projects to increase its combat efficiency now being under way. Some of these are: to "establish reliable and practical communication between the glider and tow plane," to "add pilot protection, streamline and increase flight stability," to "provide suitable landing gear to prevent damage to glider in normal tactical landing with and without wheels," to "investigate empennage failures in CG-4A gliders and provide corrective action," to "determine requirements for lights and recognition signals," and to develop a homing device and night landing aids.[18]

New Types of Gliders. In addition to the refinement of the present glider, there are other type gliders in the experimental or planning stages. Important among these is the CG-13, the thirty-place glider. It has been undergoing testing for some time, and by May, 1943, its development had progressed sufficiently to allow the Materiel Division to initiate action to procure 100 of these gliders for service tests.[19]

13. AG,AFTCC to CG,AAF, July 17, 1943, in AAG 452.1 C, Gliders.
14. Schedule of Events of Glider Demonstration, Maxton Army Air Field, Aug. 4, 1943, in AFSAG Files.
15. Washington Daily News, Aug. 6, 1943.
16. R&R, AFSAG to AC/AS, OC&R, July 6, 1943, in AAG 452.1 #2, Gliders.
17. Chief, Training Aids Division to CG,AAF, Attn: AC/AS, Training, Aug. 6, 1943, in AAG 452.1 B, Gliders.
18. R&R, AFSAG to AC/AS, MM&D, June 30, 1943, in AAG 452.1 C, Gliders.
19. R&R, AFSAG to AC/AS, MM&D, Attn: Materiel Division, May 22, 1943, in AAG 452.1, Gliders.

Douglas B-23 tow plane about to make contact with pickup loop.

Pickup arm is down and ready for contact with looped nylon towrope strung on pickup stanchions.

The development of the glider pickup solved the serious problem of the difficulty of salvaging gliders landed in small fields inaccessible to ground transportation. By this means gliders can evacuate wounded and can be used over and over again.

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As demonstrated in the May airborne maneuvers, gliders, while engaged in combat operations, are highly vulnerable to both air and ground attack. During the early period of tactical development, it was generally felt that "a requirement exists for a heavily armed, armored assault glider to precede Troop Carrier gliders into fields and neutralize unexpected ground fire while Troop Carrier gliders are landing."[20] As early as June, 1942, action was initiated in Headquarters to develop an assault glider,[21] but after a year's experimentation, in September, 1943, the Office of the Special Assistant for the Glider Program recommended that its further development be terminated.[22]

Cargo Gliders. The primary purpose of the tactical glider had been established as a troop-carrier in combat operations. During mid-1942, however, the Air Forces began to visualize the glider as a cargo-carrying machine, a supplement to the transport airplane. It was hoped that the glider would become "a means for greatly increasing the value of the combat airplane by decreasing its dependence upon ground or surface transportation facilities."[23] During January and February, 1943, the Air Transport Command and Eastern Air Lines conducted towing tests with the CG-4A. The conclusion reached was that "the transportation efficiency of the C-49 or C-47 towing a CG-4A glider is very poor when compared to the airplane alone . . . C-49 or C-47 loaded to about 31,000 (pounds gross weight) will have a greater payload per hour than the combination with the airplane itself loaded to 28,000."[24]

Early in July, 1943, the Royal Air Force conducted an experimental 3,500-mile transoceanic tow with a CG-4A glider and a C-47 transport. This important "first" was preceded by many months of experimental hops with a fully loaded glider.[25] Although the experiment proved that gliders can be towed overseas, similar operations are not deemed economical or practical at the present time.[26] As the CG-4A is designed to tow at 120 miles per hour, and as this rate is considerably below the normal cruising speed of a transport plane, excessive gasoline consumption and loss of ton-miles per hour results. In the accomplishment of the flight, the glider and tow plane had to wait for good weather, and during the trip extreme pilot fatigue occurred.[27] The worth of the glider as a cargo-carrier over long distances has not yet been successfully demonstrated, although it is felt that this experiment was a step toward practical overseas glider transport.[28] It is possible that the development of the wing-designed cargo glider, as directed by the conference of February 11, 1943, may afford a feasible solution to the question of cargo glider transport.

Automatic Tow. Recently, an automatic towing device has been developed, which works "perfectly in all the standard aircraft maneuvers within the tolerance specified for automatic pilots." As this device solves the difficulties of pilot fatigue and the inability to tow under instrument conditions, it is hoped that gliders can be towed to theaters of operation under adverse weather conditions.[29] Gliders equipped with the automatic towing device are now being sent to tactical glider stations, and it has been directed that they must be employed to an extent that "every glider pilot is familiar with and has confidence in the auto-tow prior to his transfer to a combat theater."[30] In all probability continuing development and refinement of gliders and their accessories will produce a more efficient combat glider.

Combat Employment of Gliders. During this period of operational procedure development and glider refinement, proponents of the glider were particularly anxious

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20. R&R, AC/AS, Training to AFSAG, June 14, 1943, in AAG 354.2, Maneuvers.
21. AFRGS to CG,AFTCC, Aug. 6, 1942, in AAG 452.1 B, Gliders.
22. Daily Diary, AFSAG, Sept. 2, 1943.
23. AFDMR to CG,AFAMC, June 18, 1942, in AAG 452.1 B, Gliders.
24. Report 4095, Army CG-4A Glider Towing Tests, Eastern Air Lines, New York, N.Y., Feb. 15, 1943.
25. Washington Post, July 5, 1943.
26. Historical Officer, Air Transport Command to AFIHD, July 12, 1943, in AFIHD Files.
27. Historical Officer, Air Transport Command to AFIHD, July 6, 1943, in ibid.
28. Historical Officer, Air Transport Command to AFIHD, July 12, 1943, in ibid.
29. Daily Diary, AAFFTC, June 18, 1943.
30. AFSAG to CG,AFTCC, July 24, 1943, in AAG 353 A, Glider Training.

to prove its tactical value. Such vindication could only come with combat participation. Allied employment of the glider in combat operations is still in its infancy; however, the invasion of Sicily marked the first tactical test. Complete information on this operation is not yet available, but evidently 137 CG-4A gliders manned by British pilots and troops and American co-pilots were employed.

> Shortly before midnight on 9th July, a force of about 500 troop carriers and gliders, preceding the seaborne landings, dropped forces north-west of Syracuse and on selected points between Licata and Gela. Unexpected strong headwinds forced a number of gliders into the sea short of their mark, but the majority landed safely despite interference from searchlights and light flak. The principal role of this airborne force was to harass and embarass the coastal defenses and while destroying the enemy's lines of communications, preserving those of eventual use to us. These acts, as far as can be ascertained at this early hour, were satisfactorily accomplished, though it would seem that the strong winds encountered badly dispersed the force and rendered their task more difficult. . . .[31]

It would also appear that a number of the gliders were innecessarily damaged due to the fact that the British pilots had not received adequate training in the landing characteristics of the CG-4A. But on the whole, it is generally felt that the employment of the gliders was a success, or in the words of General Bernard L. Montgomery, "they advanced our operations by one week."[32]

Past and more extensive employment of parachute troops in airborne operations has created the general feeling that they are the most important and usable agency to spearhead an invasion. Proponents of the glider, on the other hand, believe that in certain circumstances glider troops can more adequately perform the initial invasion mission. The remarks of Major General Frederick A. M. Browning, in charge of British airborne operations, outline the comparative values of glider and parachute troops as demonstrated in the Sicilian invasion.

> The advantages of glider borne troops over parachute troops, wherever it is possible to use the former, have been demonstrated. Troops carried by gliders land in formed, even if small, bodies, and can carry with them a more liberal supply of ammunition, transport, and comparatively heavy weapons. They can land in most country that is suitable for parachute troops but their range may not be quite so great. Gliders can be released at a distance from their landing zones and thus the aircraft may not have to run the same risks of flak that they might experience when carrying parachute troops. . . . Gliders themselves having been released in the correct place are difficult flak targets. On the other hand, it is almost certain that in future small advanced parties will have to land ahead of the gliders to mark the landing areas with small lights. . . . There is probably more risk in parachute troops being dropped in the wrong place than there is of gliders being released incorrectly.[33]

At present among the Army Air Forces proponents of the gliders, there is a general feeling that their relative value should and must be brought to the attention of staff officers and theater commanders.

In the Commanding General of the Army Air Forces the glider finds its strongest champion. General Arnold has stated recently that he believes that the glider will be a

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31. Royal Air Force Middle East Weekly Intelligence Summary No. 160, July 6-13, 1943, in AAF Intelligence Library.
32. Washington Post, July 23, 1943.
33. Lecture, Richard du Pont, Special Assistant for the Glider Program, at AAF Officers' Staff Course, Sept. 3, 1943.

"vital factor" in "initial assault operations" on the European continent.[34] When invasion from the British Isles comes, United States gliders, glider pilots, and glider troops will undoubtedly be employed. Personnel closely connected with the program believe that then their tactical effectiveness will be absolutely vindicated. With combat participation the true results of two and one-half years of almost heartbreaking training effort by the Flying Training Command under vast, swiftly changing, and largely uncoordinated directives and the recent joint development of tactics and techniques by the Troop Carrier and Airborne Commands will be demonstrated.

Summary. The period since the tactical glider came into quantity production may be characterized as another experimental phase in the glider program. It has been marked by two interrelated trends, the development of combat tactics and techniques and the desire of the proponents of the glider to convince Air and Ground personnel of the value of their machine. Both of these trends are still growing in scope and force. In comparison with the history of other Air Forces weapons, the glider and its pilot had received the benefit of very little tactical technique development or operational training before commitment to combat operations. But the lessons of the Sicilian campaign and the Laurinburg-Maxton maneuvers, as well as materiel improvements, are steps toward the more efficient utilization of this new and potentially powerful weapon.

34. General Arnold to Lt. Gen. J. L. Devers, Aug. 1, 1942, in AAG 312.1 C, Operations Letters.

Chapter XIII

SUMMARY

The glider program stands as a nonconformist; it is unlike any other program in the history of Air Forces training. Born in the period of rapid military expansion prior to the entrance of the United States into World War II and greatly influenced by the tremendous growth of the Air Forces after Pearl Harbor, its course has been determined by a series of large and rapidly changing production objectives. It is these objectives and the efforts of the responsible agencies to effect them that determine most of the major trends that characterize the glider program. Unlike most other Air Forces programs which had their inception in the 1930's in the easy days of peace, when careful planning could lay a well-grounded foundation for future expansion, the glider program was precipitated into mass production of men and machines at a time when the Air Forces were already straining under a greatly augmented development and training program.

From the inception of the first glider program in February, 1941, to December of that year, training procedures, materiel development, and tentative tactical planning were characteristically experimental. Early in 1942 the glider pilot training program called for mass production, 1,000 pilots to be produced by the end of that year. One month later the objective was tripled, while in May it was again increased to the staggering total of 6,000 pilots by December 31, 1942. The impossibility of accomplishing this quota soon was recognized, and the glider pilot objective was gradually tapered down to more attainable totals. In a period of seven months, beginning July 18, 1942, the program underwent a reduction, an inexplicable increase, and then three more reductions. February 18, 1943, brought about a diversion of personnel and curtailment of training unprecedented in Air Forces history. Over seven thousand of some ten thousand trainees were reclassified and rerouted to other types of training. Since February training has continued on the more logical basis of 200 graduates a month, with production for 1944 conforming to this schedule.

The successful administration of such a swiftly changing program with its necessary liaison functions would be a tremendous task for an organization well prepared to effect it. But from its inauguration, administrative operation of the glider program was hindered by the fact that military glider pilotage was an entirely new science to Air Forces personnel. While attempting to effect the program, it was necessary to build up through swift and costly experimentation, training procedures, combat tactics and techniques, materiel, and the required operating facilities. During the experimental period the administration of the glider program was a function of the Training and Operations Division and later of the Training Division of the Office Chief of Air Corps.

In October, 1941, Lewin B. Barringer was summoned to Washington as civilian coordinator of the glider program. He was later commissioned, and remained in that position until his death in January, 1943. After the March 9, 1942, reorganization of the Air Forces, the administration of the glider program became a function of the Office of the Director of Air Support. With the establishment of the Flying Training Command in January, 1942, the actual conduct of individual training came under that Command, while the Troop Carrier Command was designated the responsible agency for operational training upon its establishment in June, 1942. Throughout 1942 the glider program suffered from a lack of necessary cooperative planning and direction among the agencies interested in its accomplishment. Gradually, toward the end of that year these agencies began to exert a stronger influence on the course of the program. In April, 1943, the administration and coordination of the glider program were finally centered in a special staff office, the Office of the Special Assistant for the Glider Program, under Richard C. du Pont. [1]

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1. Since the completion of this study, Richard C. du Pont has been killed in a glider crash, September 13, 1943.

In recruiting personnel, both students and instructors, the glider program has been characterized by a shifting procurement basis closely allied with the changing directives under which it operated. In the experimental period trainees were obtained from officer-pilots of the Air Forces. But the requirements of the expansion program and established pilot priorities soon obviated the use of these men. With the 1,000 Program the qualifications were altered to accept Air Forces enlisted men with previous aviation experience, and although an attempt was made to return to the former procurement system, this basis continued until the 6,000 Program. Under the procurement effort of the 6,000 Program, the Air Forces found it necessary to tap every potential trainee source. Officers and enlisted men of the three Arms of the Service and civilian applicants were accepted. But under the press of wartime mobilization there were not enough men with previous aviation or glider experience. Finally, men without the requisite aerial experience were procured, causing the Air Forces to add an additional stage to glider training. A glittering publicity campaign was launched; men from all walks of life joined the glider program.

As the bulk of the trainees entered the glider program during the summer of 1942, and as the lack of both gliders and tow planes soon necessitated the tapering off of the objective, by the end of the year more trainees had been entered in the program than were required by the final objective. The candidates were accumulated in pools, were not afforded sufficient occupation, and an alarming morale situation developed. Then came the February, 1943, diversion of excess trainees. By the end of 1943 all remaining trainees will have been graduated. Through bitter experience as the operational phase developed the Air Forces found that many of the trainees without previous aviation experience did not possess the flying aptitude necessary for tactical glider pilotage. In the establishment of the 1944 program, an attempt was made to return the procurement basis to graduates of Air Forces Advanced Pilot Schools; controversy developed and a compromise was effected. Future glider pilot students will be procured from Air Forces enlisted personnel possessing aviation experience. Until November, 1942, graduate glider pilots were appointed staff sergeants. On that date this procedure was changed. Graduates are now appointed flight officers with possible future promotion to commissioned grades in the operational units.

Coupled with the difficulty of securing sufficient students, the glider program, especially in its early days, was hindered by a lack of adequately qualified ground and flight instructors. Much of the early training was given at civilian schools; and there were only a few men familiar with the technique of glider flying in the United States. Throughout the early period the ratio of students to instructors was far too high. Eventually, in August, 1942, graduate glider pilots were employed as instructors, and the situation noticeably improved.

The materiel factor, the acute shortage of both gliders and tow planes, was the major determiner of the successive downward revisions of the final objective. Even in the earliest days of the program this condition became manifest, growing in seriousness as the objective was rapidly increased. In June, 1942, the lack of training gliders necessitated an expedient change in the training program--the use of cub type airplanes and the institution of the dead stick landing course. The entire conduct of the program was predicated on the availability of tactical type gliders. When the plans for the first large program were formulated, an already overtaxed aviation industry was burdened with the construction of large numbers of hitherto unmanufactured craft. Serious materiel shortages and engineering problems developed; as a result, tactical gliders did not start coming off the production lines as soon as expected.

The shortage of both liaison type planes for towing training type gliders and C-47 and C-53 planes for towing tactical type gliders was even more acute. Production of these planes was not sufficient to meet all Air Forces commitments. Upward revision of the glider objective had thrown the original estimates based on the availability of transport airplanes completely out of gear. At length, in October, 1942, the Troop Carrier Command assumed the conduct of towing operations and remained in this capacity until sufficient C-60 planes to meet the requirements of revised objectives could be allotted to the Flying Training Command.

The shortage of tow planes and gliders was not the only materiel factor that hindered the accomplishment of the glider training program. As soon as tactical gliders began to arrive at the schools, severe structural failures and maintenance difficulties developed. For long periods a large percentage of the gliders remained grounded, and all attempts to mitigate the the maintenance problem met with failure. An identical, although not so serious problem, occurred with the tow planes, which resulted in the fact that not as many tow hours as had been expected were secured from each plane.

The establishment of a standardized training program was made virtually impossible by the shifting objectives, the shortage of tow planes and gliders, and the changes in instruction occasioned by experience gained in training. Almost every revision of the objective necessitated either a change in the stages of training or the hours allotted to the separate stages. Training progressed from one stage, to two, to three, then four, and finally after February, 1943, was curtailed to one stage. At no time did trainees flow rapidly through the schools, delay being caused by necessary adjustment of personnel, equipment, and facilities. Consequently, throughout 1942 training procedures did not develop as efficiently as they would have under a more standardized stage method. It was not until the curtailment of training to one phase that the efforts of the training agency could be fully devoted to the development and establishment of adequate training methods and procedures. Nevertheless, throughout the program several major trends influenced instruction. Some of these have not yet reached their culmination. Among these were a decrease in soaring, and increase in dead stick landing practice, and the feeling that the training glider may eventually prove to be of little value. The amount and scope of ground instruction increased as training progressed. A greater variety of subjects was taught; a more concentrated attempt was made to prepare the glider pilot for his position as a soldier and as an officer.

Throughout the entire program, and especially as training on tactical type gliders began to get underway, training was hindered by a lack of knowledge of the eventual mission of the glider pilot. From the summer of 1942 there was a growing consciousness of the necessity of fitting the training program to this end. Attempts were made to institute an Infantry training course, but until February, 1943, and the establishment of the Consolidated Glider Pool, nothing of importance was achieved.

Individual training could not receive the benefits of tactical glider experience until combat procedures were established in operational training. The Troop Carrier Command began to receive gliders during December, 1942. But during the early months of 1943 training was experimental and intermittent. Finally, with the establishment of the Glider Pilot Combat Training Unit in April, tactical training became more efficient and effective.

There has always existed a certain distrust in the effectiveness of the glider as a tactical weapon among both Ground and Air personnel. Concurrent with the recent development of combat tactics and techniques, individuals convinced of the efficacy of the glider have attempted to vindicate its value. Slowly, opposition to the glider is decreasing. Developing tactics and techniques are making themselves felt in both individual and unit training. In the invasion of Sicily, Allied employment of gliders received its first combat test. Further use will undoubtedly come with larger offensive operations on the European continent.

In the glider program, as in any other experimental program, there are still a great many problems to be solved before maximum achievement will logically follow maximum effort. The administration and coordination of the program within the Air Forces have been centered in one office. Production quotas have finally been grounded on the only logical basis, the activation schedule of airborne divisions. This is a major step toward coordinated planning. Certain vital problems, however, remain to be solved. Unit glider training that will effectively produce large numbers of highly trained combat pilots still must be placed in operation. Individual training, although more extensively developed, must benefit further from combat experience. And most important of all, the glider must be absolutely proved and then wholeheartedly accepted as an effective military weapon.

BIBLIOGRAPHY

Official Publications

War Department:

WD Adjutant General Letters
WD Press Releases

Headquarters, Army Air Forces:

AAF General Orders
AAF Letters
AAF Regulations
AAF Training Standards

Headquarters, Training Command (Flying Training Command):

TC Memoranda
FTC Memoranda

Headquarters, Troop Carrier Command:

Training Directives

Air Adjutant General Central Files

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452.1	Gliders
452.1 #2	Gliders
452.1 A	Gliders
452.1 B	Gliders
452.1 C	Gliders

Command and Office Files

Army Air Forces Training Command (Flying Training Command):

Correspondence from Central Files
Programs of Instruction
Project Book of the Commanding General

Office of Assistant Chief of the Air Staff, Training:

Daily Diary, Flying Training Command
Final Report of the Glider Survey Board
Miscellaneous Correspondence
Programs of Instruction

Office of the Assistant Chief of the Air Staff, Intelligence:

Historical Division:

Consolidated Flying Training Command Reports
Miscellaneous Correspondence

Intelligence Library:

Detailed Interrogation Report on Glider Pilot captured at Chaoaut on May 8, 1943. Accession No. K-26105.
Royal Air Force Middle East Weekly Intelligence Summary No. 160, July 6-13, 1943.

Office of the Special Assistant for the Glider Program:

Miscellaneous Correspondence

Miiscellaneous

Books:

Barringer, Lewin B., Flight without Power, Pitman Publishing Corporation, New York, N. Y., 1940.

Newspapers:

Washington Daily News, August 6, 1943.
Washington Post, July 5, 23, 1943.

Special Studies:

Analysis of the Duties of Aircrew Personnel. Bulletin No. 9. The Psychological Division, Office of the Air Surgeon, August 28, 1942.
Legislative Proposals and Enactments Relating to the AAF Training Program, 1939-1943. In preparation in AC/AS, Intelligence, Historical Division.
Report 4095, Army CG-4A Glider Towing Tests, Eastern Air Lines, New York, N. Y., February 15. 1943.

Interviews and Conversations with Personnel in:

Office of Assistant Chief of the Air Staff, Training:

Aircrew Training Division
Unit Training Division, Troop Carrier Branch

Office of Special Assistant for the Glider Program

Flying Training Command:

A-3 Division

South Plains Army Flying School, Lubbock, Texas

Flow of Students through Advanced Glider Schools[1]

	During Period				Cumulative Total	
	Entered	Elimination Rate	Graduated	Schools in Operation	Entered	Graduated
1942						
November	104	1.9	102	3	104	102
December	291	1.0	282	4	395	384
1943						
January	852*	3.0	763*	4	1247**	1147**
February	756	2.9	713	4	2003	1860
March	169	7.6	218	2	2172	2078
April	473***	4.0	437***	4	2645	2515
May	198	4.2	93	1	2843	2608
June	196	1.0	198	1	2039	2806
July	201	2.0	195	1	3240	3001

* Figures differ from January, 1943, Consolidated Flying Training Report due to exclusion of class 43-1 at Dalhart, Texas, and Lubbock, Texas, schools in totals.

** Beginning with January, 1943, cumulative totals differ by 76 entered and 80 graduated from cumulative totals on Consolidated Flying Training Reports due to errors in reporting the school at Dalhart, Texas, on the January, 1943, report.

*** Figures differ from April, 1943, Consolidated Flying Training Report due to exclusion of Victorville, California, school in totals.

1. Consolidated Flying Training Reports, Nov., 1942-July, 1943, in AFIHD Files.

APPENDIX B

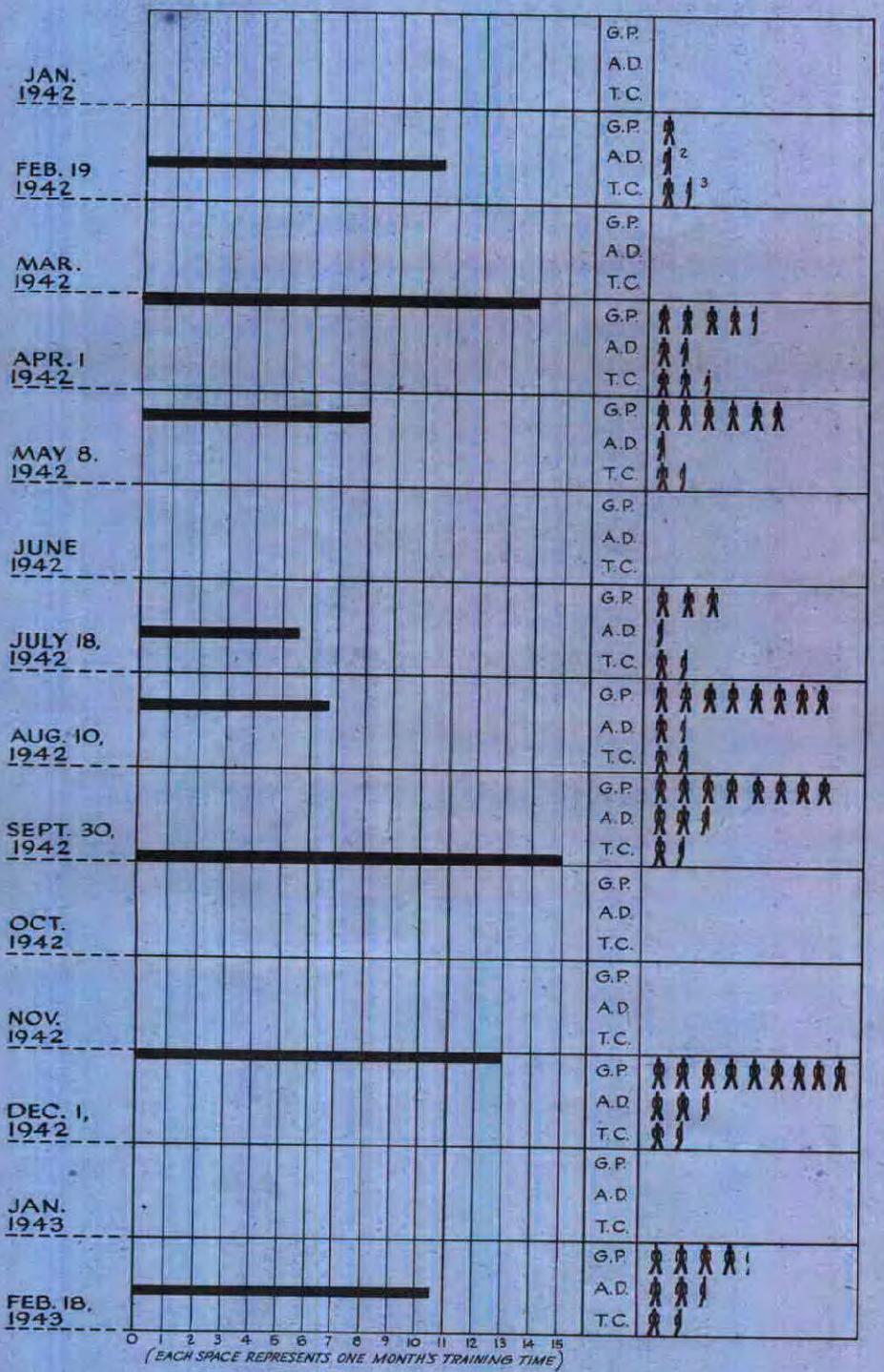
Status of Airplanes Usable as Tow Planes for Advanced Glider Training
September, 1942 - February, 1943

	1942 30 Sept.	31 Oct.	30 Nov.	31 Dec.	1943 31 Jan.	28 Feb.	
Flying Training Command Requirement for Advanced Glider Training	154	88	114	114	114	114	After February, 1943, adequate numbers of C-60's were allocated to the Flying Training Command. The Troop Carrier Command was relieved from further towing duty.
Number of Planes Assigned to Advanced Glider Training (C-47's and C-53's) *	---	52*	104**	104**	104**	104**	
Assignment of C-47's and C-53's[1]							
Air Transport Command	54	62	107	200	184	188	
Troop Carrier Command							
Continental U.S.	236	215	165	147	221	233	
Overseas	192	298	349	281	382	399	
Air Service Command	74	53	33	130	54	64	
Materiel Command	6	29	70	50	30	21	
Other Continental Activities	---	---	1	1	1	---	
Unreported***	91	52	10	26	27	59	
Total	653	709	735	835	899	967	
Assignment of C-60's[1]							
Air Transport Command	14	15	22	20	24	19	
Troop Carrier Command (Overseas)	10	10	20	15	14	15	
Air Service Command	1	2	4	9	15	8	
Materiel Command	12	19	19	19	28	57	
Other Continental Activities	10	4	1	3	10	14	
Training Command	---	---	8	24	25	18	
Unreported***	---	9	3	6	---	---	
Total	47	59	76	96	116	131	

* One Troop Carrier group) Groups without full
** Two Troop Carrier groups) complement of planes.
*** Not reported as of last day of the month.

1. Report No. SC-SP-112, Statistical Control, Sept. 22, 1943.

COMPARISON OF GLIDER PILOT OBJECTIVES TO AIRBORNE DIVISIONS & TROOP CARRIER GROUPS ACTIVATED[1], FEB. 1942 — DEC. 1943



432 PILOTS = 1 TROOP CARRIER WING
1 TROOP CARRIER WING = 1 AIRBORNE DIVISION [4]

108 GLIDER PILOTS = 1 TROOP CARRIER GROUP
4 TROOP CARRIER GROUPS = 1 WING [4]

= 1000 GLIDER PILOTS G.P. = GLIDER PILOTS A.D. = AIRBORNE DIVISION T.C. = TROOP CARRIER GROUP

[1] There is a lag of approximately two months between the activation date of a unit and time it receives glider personnel.
[2] Cumulative total of Airborne Divisions activated from G-3 Division, WDGS, Sept. 21, 1943.
[3] Cumulative total of Troop Carrier Groups activated from SC-PS-97, Statistical Control, Sept. 16, 1943.
[4] Information from Office of Special Assistant for Glider Program, Sept. 23, 1943.

C4-2555, AF

GLOSSARY OF ABBREVIATIONS

AAF	Army Air Forces
AAFTC	Training Command
AAG	Air Adjutant General
AC	Air Corps
AC/AS	Assistant Chief of the Air Staff
AC/S	Assistant Chief of Staff
ACTC	Air Corps Training Center
AFACT	Assistant Chief of Air Staff, A-3
AFAMC	Materiel Command
AFASC	Air Service Command
AFDAS	Deputy Chief of the Air Staff
AFDMR	Director of Military Requirements
AFDOP	Director of Personnel
AFGCTC	Air Forces Gulf Coast Training Center
AFIHD	Assistant Chief of Air Staff, Intelligence, Historical Division
AFPMP	Military Personnel Division
AFRAS	Director of Air Support
AFRIT	Director of Individual Training
AFROM	Director of War Organization and Movement
AFRGS	Director of Ground-Air Support
AFSAG	Special Assistant for the Glider Program
AFTCC	Troop Carrier Command
AFWCTC	Air Forces West Coast Training Center
AG	Adjutant General
AGF	Army Ground Forces
C.A.A.	Civil Aeronautics Administration
C/AC	Chief of Air Corps
C/AS	Chief of Air Staff
CG	Commanding General
CO	Commanding Officer
C.P.T.	Civilian Pilot Training (Program)
CS	Chief of Staff
D/F	Disposition Form
FTC	Flying Training Command
GCAFTC	Gulf Coast Air Forces Training Center
G.O.	General Order
G.H.Q.	General Headquarters
Hq.	Headquarters
I TCC	First Troop Carrier Command
Ibid.	The same or the same place
MM&D	Materiel, Maintenance & Distribution
n.d.	No date

OCAC	Office Chief of Air Corps
OC&R	Operations, Commitments & Requirements
OPD	Operations Division
R&R	Routing & Record Sheet
SEAFTC	Southeast Air Forces Training Center
SPAFS	South Plains Army Flying School
TC	Training Command
TC	Training Center
TCC	Troop Carrier Command
T&O	Training & Operations
T/O	Table of Organization
TWX	Teletypewriter exchange (message)
WCACTC	West Coast Air Corps Training Center
WCTC	West Coast Training Center
WD	War Department
WDGS	War Department General Staff

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