

WANTED --- BETTER BOMBER PILOTS.

In the early part of the war the majority of Bomber Command crews never had the opportunities or facilities during training for their vital task that are offered to their successors of today. There were two great advantages however that the trainees of the 1940-41 era had over those of 1943-44. Firstly the majority of the pupils under training were possessed with an interest and desire to do well and reach the operational standard at the earliest possible opportunity; they knew full well that if they failed the higher standard then set, they would lose the one and only chance to do their chosen job in this war. Secondly they had the advantage of going straight through their courses with hardly a perceptible break and knowing that at the end of it they would become active fighting members of the British forces, upon whom in those days depended the direction in which the tide of war would flow.

During the past year or so the standard of crews arriving from the Dominions where they had been trained under the Empire Air Training scheme, to the C.T.U.'s and thence to the Squadrons of Bomber Command can only be described as average quality - with very few outstanding members which were markedly noticeable in the earlier period.

What is wrong with the present day Bomber Pilot considering the far greater facilities and time available for their training? Firstly, not only because his training is much extended, but more significantly because of his long periods of waiting and idleness, he tends to lose the object which was so readily seen before. He has the feeling that, if he is lucky, he might eventually reach the operational sphere, with a resulting loss of interest when he does after an exceedingly long time and hardly realizing then what his actual object in being there is.

He is anxious therefore to get his trip in and complete his tour of the required number as soon and safely as he can; in fact he is concerned only with himself and rarely realizes, as is most important, that although he is only a small cog in an extremely large wheel his work and what he does help towards the working of that great force. In this late stage of the war we still see bombs being dropped well outside the target area and it is simply because the individual fails to realize that his own effort, collectively with those who are of the same idea, might just make that difference to bringing the war to an earlier end.

We can therefore conclude that the object of the future Bomber Pilot must always be placed before him from the time it is decided that he should ultimately reach that capacity. He is there to take his aircraft to the Target, drop his bombs on the Target and bring his aircraft safely home, understanding all the adversities that he will encounter. When the pupil arrives at his final stage of training at the C.T.U. he will have been in the Air Force for an appreciable time and will have learned all the basic principles and technicalities to make him a safe Pilot worthy of being entrusted to take not only a much more advanced type of aircraft but the greater responsibility of other human lives as well.

His own work and ability together with his desire to be equal to this trust, should ensure him a successful career in the Operational sphere.

This essay is intended to outline a few suggestions which are considered to be the essentials which all pilots should have, or should have instilled into them during training before joining a Bomber Squadron. We shall take them in turn under their headings.

### 1. Flying Standard.

What are the qualities that are required of the successful operational pilot, taking first those which can be instilled into him in the earlier part of his flying training career.

The first and foremost essential is that he must be a reliable and competent pilot able to fly his aircraft with an understanding, knowing what he is doing and why he is doing it. He must be able to do it equally well by night or by day and be able to manoeuvre and position his aircraft at will under all conditions and with confidence. There are still too many pilots arriving on the squadrons who tend to have a fear of their aircraft. If the majority of them were asked the stalling characteristics of the aircraft they were actually flying on operations one would find that they had never even tried to do it for practice or for their own interest. Consequently, if their aircraft stalled during violent evasive action, or from loss of flying speed they would not realize what was happening, or know the corrective measures, with dire results. This is the fault of the earlier training schools who have failed to encourage the pupil confidence in the ability to handle his aircraft under all conditions.

The present day Bomber Command has much wider commitments than ever before. Essentially, but today not entirely, a night striking force, the bomber pilot must have the ability to control his aircraft for long periods at a time on pure instrument flying alone, often having to carry out various manoeuvres of his aircraft on account of the many adversities he is liable to strike. It is not uncommon for the pilot to come up against poor weather, severe icing conditions which will affect both his aircraft and engines, intense A.A. fire and searchlight concentrating on him alone, fighter attack etc; these must be considered as part of any normal sortie, and it is therefore essential that the answers to every problem should be known to him. A good pilot will have the answers before he goes off and as a result will accomplish more by bringing his aircraft home, than the poor pilot who takes the attitude of "it can't happen to me". Loss of instruments occur very often under the conditions outlined above, and therefore the pilot must know, during the various manoeuvres, which instruments he can trust or in the case of total failure his last resorts and have the ability to cope on them. A good method of instruction for this purpose would be to blank off certain instruments in turn and make the pupil carry out various actions under the hood. At C.T.U. this could be carried further by the instructor giving evasive action to be carried out by indicating during fighter attack etc.

Accurate instrument flying may be considered as the  
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hall-mark of the Night Bomber Pilot not only to overcome the difficulties mentioned above, which will naturally test this to the utmost, but for the actual reaching and bombing of the target on time which is so necessary for concentration. In the early days before the present navigational aids came into being very few pilots were able to fly as accurately as was necessary on instruments. As a result the number of bombs actually falling within five miles of the target area was extremely small. The figures issued by the so-called 'boffins' to say the least, been startling. The aircraft were satisfactory for those days compared to the defences, but the two essentials, good navigation and more important instrument flying for navigation were of not very high quality. However, if the pilot had flown accurately according to the demands of the Navigator it is certain that the percentage of bombs would have been double that actually reaching the target area. At the present time with the aids available no one should ever miss the Target, but they do so because pilots still don't realize that they must instrument fly for Navigation which means accurate Courses, Speed and Height. During instrument flying teaching at the school this should be drummed into the pupil and no pupil passed fit for Bomber Operations until he can actually carry out these things to a minimum limit.

Bound up with this question of I.F. is the ability to use the Standard Blind Approach system and all other available aids for returning to base to make a safe landing. On many occasions operations are cancelled, although conditions are ideal for bombing a Target, because of base weather conditions. At present the ability to use the beam is considerably restricted and as a result the losses sustained by returning aircraft would far outweigh the value gained by dropping bombs on an important target. Instrument Flying should go hand in hand with the beam and every available opportunity of improving both in conjunction should be devised.

If we have pilots who have to avoid flying in poor conditions or if in doing so they get caught and tend to lose their heads, simply from lack of confidence and general ability in all the spheres outlined above, then there will be a definite limit to the Operational scope of the Service and Command - Whereas the Service who has trained its pilots in all conditions can operate with much greater efficiency and safety.

Therefore we should suggest that from E.F.T.S. more time should be given to instrument flying and at C.T.S. onwards a combination of beam, instrument and bad weather flying, the gaining of confidence which is extremely vital for success. At C.T.H. cross countries should be carried out first dual and then solo in complete cloud conditions, including climbing to height and descending. This would give the pilot an idea of true cloud and instrument flying and the possible ~~psychological~~ <sup>physiological</sup> reactions which can result.

We can sum up very briefly by saying that the ideal bomber pilot is the man who can do his job under all conditions and adversities and yet bring his aircraft back to a safe landing.

## 2. Engine Handling.

The second if not the most important consideration for the Bomber Pilot is the understanding of engine handling and manipulation. In order to drop the maximum weight of bombs on a Target we must reduce our petrol load to the minimum for safety. It is therefore most important that the pilot should have been instructed both in Range and Endurance Flying which depends entirely on the correct handling of his engines. These types of flying are entirely different, a

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fact which some still fail to realize, the former naturally being the one with which the Pilot will normally have to deal. Engine limitations, speeds, superchargers, revs and boost all play an important part. This subject should be introduced at S.F.T.S. and an aircraft used of a type which could embrace all these technicalities in a simple form. Petrol consumption and A.M.P.G. should be studied and pupils encouraged to take personal interest by obtaining their own figures from countries etc. All C.T.S.'s should be equipped with at least one aircraft fitted with a flow meter and pupils given practical demonstrations as well as seeing the film on the same subject. Most Squadrons record Petrol Consumptions for their individual aircraft and it is startling to see the various consumptions obtained by different pilots. Invariably pilots tend to have high or low petrol figures but if the former are studied one can usually find that their idea of Range flying has been far from the correct method.

Engine manipulation is the other important factor and many pilots, especially in heavy aircraft, tend to ignore that side altogether, relying entirely upon their Flight Engineer. The latter should be there as a guide, but the pilot must understand the limitations and help with a periodic check on the instruments and gauges himself. If an engine fails or gauges register readings beyond permissible limits he should have sufficient knowledge of the engine to decide for himself what is wrong and whether there is immediate remedial action without wasting time and probably having an argument with the engineer. By this measure many engines have been saved for further use, whereas the careless pilot has waited until it has either 'cooked' or even worse caught fire with a resulting danger to the whole aircraft.

C.T.S.'s should cover the handling of the engines the pilot will have to deal with on operations, whereas his basic knowledge should have been gleaned starting from S.F.T.S. on the four stroke cycle and gradually entering through S.F.T.S. and A.F.S. The lectures must be designed so that they are progressive throughout his training no matter to which school he may go. Ex-operational instructors should be given a handling course at the makers and combined with their experience of the engine on operations should be able to put over the subject much more practically and simply than an ordinary ground Engineer who always tends to talk over the head of the pupil.

3. Initiative and Self-reliance.

The next important quality required in the make-up of the Operational Pilot is the combination of Initiative and self-reliance and is an extremely important factor. On operations with the present complicated equipment in the aircraft it quite often happens that one or more things are liable to fail leaving the Captain faced with a difficult situation. It is then that the qualities of Initiative and self-reliance must play a large part. He has no other aid beside this and only by his own ability and judgment can he carry on his duty. The non-justifiable early return is still taking place and shows very little sign of diminishing - and when the evidence is boiled down it shows that it is nearly always due to lack of initiative on the part of the Pilot and his failing to see up a difficult situation by not having the confidence in himself to know what to do. A good Captain works out his own ideas and the best methods by which he will reach and attack his target, how he proposes to act if the aircraft fails or when caught by the opposition. Although basing his tactics on proven methods

methods he has in himself that confidence and initiative to work out his own plan. It is felt that the pre-C.T.U. units do not try to develop these qualities sufficiently. The pupil tends to become one of a mob, and if allowed will become willing to be led rather than take the trouble to lead himself. The pupil should therefore be encouraged by being given a small job of importance which would entail a certain amount of initiative and self reliance if he is to carry it out efficiently, such as squad leader or in charge of some section. He should be encouraged to find out things for himself and the answers without continually being spoon fed or led by the hand of the instructor, thereby learning more and using his initiative to find out.

From the flying side they could be developed by allowing the pupil to work himself round difficult situations such as all weather flying or carrying out more practical experiments on his own. This would lead to develop this important quality along the right lines for when his final test of skill comes when facing the enemy.

#### 4. Discipline.

It is largely upon discipline that the whole structure of individual and collective effort on operations depends. The operational pilot should not be entirely concerned with his own individual effort in the air but by understanding what is required of his rank he can be of equal value on the Ground side. All aircrew on Squadrons are either officers or senior P.C.O.'s, and thus have some status to uphold. By their example they can influence to a very great extent the morale and discipline of their Squadrons including the airman who tend to regard the aircrew as superior beings. If they fail in their duties as officers or P.C.O.'s by being slack and poorly disciplined either in manner or ignorance of duties there will be an immediate loss of prestige with a resulting effect on the work of those below.

As far as his own personal crew are concerned there will obviously spring up a camaraderie, as is natural with those who face danger together, but provided the Captain does not allow it to be carried too far whereby the discipline and work could be undermined, all should be well. Both in the air and on the ground the Captain should make the crew feel that although he is one of them he is their leader, and by his self-discipline and reliability as such, the efficiency of his team would show a marked improvement together with their all round ability in tackling their job.

Under the present system pupils arrive at their C.T.U. as officers or P.C.O.'s having recently been promoted from the rank of L.A.C., and with little or no instruction as to how they should carry the rank. They are aware of their privileges but tend to forget their responsibilities, their relationship with other ranks being precisely the same as when they were L.A.C.'s. It is therefore difficult to maintain discipline under the circumstances and the only solution would be to withhold commissioning and promotion until they are due to go to a Squadron. Commissions should be drastically reduced and commissions given only to those who have proved their worth on all sides. It should be set up as a goal which only those capable of self-discipline, the most important factor as far as further discipline goes, would reach. If the present system is maintained there should be established a short training course at P.R.C. where instruction could be given in the duties of an officer, the basis of which is discipline, so that when this rank is attained he will be familiar with his responsibilities both to himself and the Service.

### 5. Leadership.

It is only by good leadership and Captaincy that the operational pilot can ever achieve complete success. The ability to handle his crew and obtain the maximum co-operation and efficiency is the quality to which every Captain should aspire. Every man is not a born leader but provided he is shown the way and the necessary qualities that are required, then by his own character and self discipline he can normally fall into that capacity. If he fails then he should never in the first place have been promoted to leader status or become a Bomber Pilot. The essential qualities that the operational pilot should have to be a good leader are -

- (1) The full knowledge and understanding of his duties both on the ground and in the air.
- (2) Good self discipline and character.
- (3) Reliability and endurance under difficult circumstances.
- (4) The art of dealing with human nature.

Many a sortie has been abandoned or a crew failed because of a Captain's lack of these qualities.

The first real chance of leadership that a Pilot gets is when he gets to his O.T.U. where he is formed into a Bomber crew. Some immediately take to the position and do well, quickly gaining the trust of their crew, others just get along as best they can but with no real drive or incentive behind them, while the remainder simply are not fit to become leaders or Captains in any sense of the word. On more than one occasion it has been noticed that the Pilot, or so-called Captain of the aircraft is so weak that he allows himself to be governed and over-ruled by another or by several members of his crew. In an emergency this would invariably result in complete panic due to lack of co-ordination and realization as to who is giving the orders - and thus another aircraft is lost.

Leadership should be instilled into the pupil from the start provided it is carried out along the right lines. Lectures on Captaincy, crew co-operation, discipline etc. should be put over to him so that he is made to realize that there is more in his job than simply driving a bomber. His leadership could be exercised at O.F.T.S. and onwards by putting him in charge of a fellow pupil in the air or a small section on the ground and changing the position over at regular intervals with the remainder. At O.T.U. the Captain should be more carefully watched and assessed not only on the ground but in the air. The instructor should go simply as a passenger and at the end of the trip point out to the Captain where he was at fault in exercising his Leadership, so that he won't get away with a false start with his crew.

The various qualities outlined above are just a brief outline of what is required of the present day Bomber Pilot. Many have those qualities but a few greater proportion tend to lack one or several of these essentials. Our aircraft of the present Bomber Command are far superior to any of which Pilots of 1940-41 ever dreamed, so it is up to the airmen of today to ensure that this superiority does not lie only in the aircraft but in themselves. They have proved their worth in many of the battles Bomber Command has fought but this must never deter the newer recruits from even greater efforts whereby every bomb taken to the Target is dropped on the Target - the main responsibility of which naturally comes down through his Squadron and crew to himself - the Bomber Pilot.

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