

# AUSTER NEWS

Published by AUSTER AIRCRAFT Limited  
REARSBY AERODROME · LEICESTER · ENGLAND



L. STORER.



Vol 6 : No. 5



# EQUIPMENT for AIRCRAFT

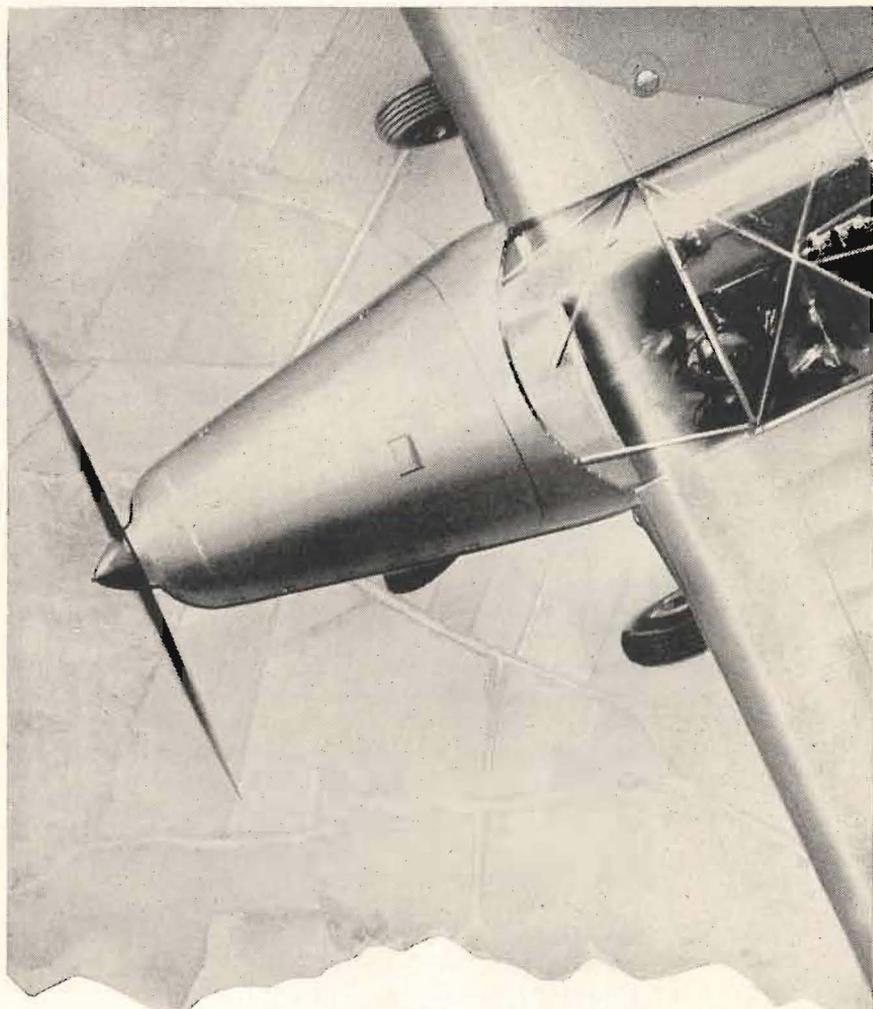
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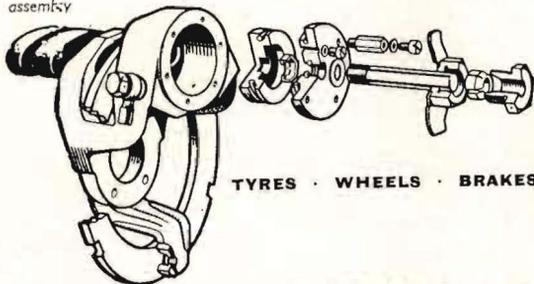
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# AUSTER NEWS

Vol. 6 : No. 5

Mar./April 1957



ONE OF THE OUTCOMES of the 1939-45 War was the development of many techniques leading to the greater efficiency of the Allied fighting forces. One of these was the formation of the Air Observation Post Squadrons by the British Army, these units equipped with Auster light planes were used to observe and direct the fire from Allied artillery. Air O.P. proved to be so successful that it was adopted by many other countries and is now an integral part of their armed forces.

The story of the Air O.P. squadrons has been written by two ex-Artillery officers and is contained in the book "Unarmed into Battle" which is reviewed in this issue of the Auster News. The book follows closely the Development of the Air O.P. and makes very interesting reading. Some of the exploits in which the Austers were involved prove both amusing and hair raising. However, the roll of honour reproduced at the end of the book shows that the price was paid, in both men and machines, for the audacious way in which they flew "Unarmed into Battle".



## Cover Photo

WITH FLAPS FULLY DOWN the Auster Agricola returns from an aerial topdressing flight in New Zealand. See page 12.

# Unarmed into Battle

ON the 16th September 1944 at the height of the Allied offensive, one of the war's most unusual actions took place. In command of it was a British Army pilot in a solitary Auster flying high above the French coast. Far below him Canadian troops were moving onto their objective but artillery fire was needed to support their attack. The Auster pilot acting as an A.O.P. (Air Observation Post) radioed the order to fire and in a secret emplacement on the English mainland near Dover, a 15-inch coastal battery opened up! 80 seconds later the shell landed in France and was the forerunner of a cross channel bombardment by super heavy long range guns whose crews would never see their target. During this operation, at 42,000 yards range—over 23 miles—direct hits were scored on a gun emplacement and other shells were landed within 5 yards of targets. The entire bombardment was controlled by the Auster pilot and lasted 5 days during which 200 rounds were fired.

This operation is one of many which make exciting reading in a book recently published entitled "Unarmed into Battle". The book describes, for the first time, the formation and operations of the Air Observation Post Squadrons attached to the British Army.

Written jointly by Major General H. J. Parham, C.B., C.B.E., D.S.O., and E. M. G. Belfield, M.A., both late of the Royal Artillery, "Unarmed into Battle" fully records the endeavours and foresight of the few enthusiasts who as early as 1934, had visions of trained Artillery officers piloting light unarmed aircraft to observe and direct artillery fire. The need for some quicker method of observation had become apparent for the set-up in those days incurred delays which a far-sighted few could see would be unacceptable in future warfare. In the middle thirties if a battery commander wished to see a target out of sight i.e. behind a hill, he had to wait for an aircraft to be sent from a distant landing ground, when 5 minutes in the air above his own guns would meet all his needs. This line of reasoning was proved entirely sound 8 years later when the Auster O.P. units went into action in Tunisia and were a great success. From this campaign many lessons were learned, tactics changed, and techniques improved. The next campaign in which the Air O.P. played a major part was the capture of Sicily, it was during this action that the Air O.P. directed Naval gunfire for the first time. The target was an enemy ship lying in Catania harbour. This successful 'shoot' resulted in the ship being subsequently captured and whenever in the future the Royal Navy

bombarded inland targets the request was that the Auster Air O.P.'s should observe for them.

Moving into Italy the Air O.P.'s were in even greater demand—the mountain areas hid targets from the guns and ground observation posts and the flat country beyond Naples provided few elevated sites for ground O.P.'s.

The German opinion of the value of Air Observation Posts was expressed during interrogations with prisoners of war. They all said that they had no specific orders what to do when an Air O.P. appeared. Opinions were divided, half said it was stupid to open fire, thereby bringing down a murderous barrage. The others said they always opened up with small arms fire if it was within range but that this was ineffective. It was in fact evident that the Germans were coming to have a very healthy respect for the Air O.P. and their firing usually ceased directly an Auster took the air; thus Counter-Battery sorties except at dusk when accurate pin-pointing was difficult, were largely fruitless.

By now (late 1943) the light unarmed Auster was being fully exploited to perform many other duties, a catalogue of some of these jobs is interesting: the spotting of flak positions during close support bombing attacks, and the subsequent engagement of these positions; the reconnaissance of Division and regimental gun areas, roads and tracks: the taking up of Infantry and other Commanders to see the actual ground over which they were to operate: information sorties to confirm the position of both our own troops and the



*Almost any type of territory was chosen by Air O.P. pilots as a landing ground. Here, an Auster A.O.P. Mk. 5 uses a farmyard.*

enemy's: the supplying of information about landing grounds to the R.A.F. communications flights: the transmission of a "running commentary" by R/T direct to Corps H.Q. on the progress of an operation as seen from the air, the collection of air photographs, the night observation of fire, and the observation of smoke screens and their adjustment for position and density. All these duties came easily within the Auster's scope, for its short take-off and landing characteristics gave its pilots the ability to select any small piece of ground, or even roads, close to front line units where it was readily available for almost any purpose.

The end of the war was now in sight, and as the Allies advanced rapidly out of Italy and into Austria many situations were met that called for considerable coolness and resource. Captain Reynolds of the 651 Squadron has given an account of such an incident. "In the early afternoon of May 8th, on orders from Major Neathercoat, I landed in a field near Villach. Major Neathercoat met me here and gave me further orders to proceed to Klagenfurt Aerodrome and, if it was serviceable (the R.E. were expected to be there) to land. I arrived over Klagenfurt Aerodrome and saw a green Very light rise from near the control tower. On taxi-ing in I was surprised to see that the ground staff was using flags to signal me in. I soon saw they were Luftwaffe personnel and, presuming them to be acting under orders of the R.E., I taxied in and switched off. A Lieutenant came up to me as I climbed out of my aircraft. A few minutes' conversation showed that I was the only Englishman on the airfield and that I had landed amongst the full station personnel armed with all weapons, and possessing a varied selection of aircraft from F.W. 190s to Fieseler Storch. I saw that it was up to me to prevent, as best I could, any sabotage to their equipment as well as any to my aircraft or myself. There followed a rather uncomfortable afternoon and evening bluffing the Station Commander that I had expected to find things as they were and that my unit was due to arrive at any moment. By dusk my story was wearing a bit thin when, to my relief, Major Neathercoat appeared in his jeep. He went off to find some infantry to occupy the aerodrome, and half an hour after dark they arrived and I posted them at strategic points with machine guns covering the hangars and runway". The Italian campaign was ended.

### **Over to France!**

As the Allied armies moved into France so did the Air O.P. units. "Unarmed into Battle" records a typical channel crossing of an Auster squadron and a subsequent operation. The late Captain R. H. C. Woodman, R.A. of 622 Squadron wrote in his diary:

*June 8th.*

“Beautiful warm sunny day. Our message came after lunch. Packed up our kites, re-netted our wireless, worked out our courses, E.T.A.s., etc. Marked the landing ground on our maps, struggled into our Mae Wests, fixed the dinghies, bundled G. Chapman (my batman) into the back and took off. I circled the airfield in England at 1,500 feet and then set course. A Walrus leading the party, followed by Mac, Peter, Terry and myself. I had Chapman in the back looking out for enemy fighters. After ten minutes I ran into sea mist and lost sight of the others ahead, added to which my wireless went ‘off net’ so I just flew on compass hoping all would be O.K. Just after taking off I saw below me, anchored on the sea just off shore, dozens and dozens of huge concrete blocks, each looking like a block of flats. I found out later they were the ‘caissons’ of the prefabricated ‘Mulberry’ harbour.

“After forty-five minutes the mist cleared and I saw the others ahead. Down on the starboard side 2,000 feet below, saw streams of ships coming and going from the beach-head along the lanes swept by the mine sweepers. We had orders to keep fairly close to them in case we were attacked . . . After about an hour the French coast materialised, Le Havre to the left, the Cherbourg Peninsula away to the right! As we passed over the protecting screen of warships at 2,000 feet (to be clear of the balloons) the Navy opened fire at us with Bofors. One shell burst between Alec and the Walrus. Someone fired the recognition signal and the Navy shut up. We passed over the coast at Arromanches, which looked a bit of a mess. Everywhere seemed to be on fire and an occasional shell kept bursting in the water among the thousands of large and small ships which were hurrying to and fro. The Walrus flashed ‘Good luck’ in morse and turned for home. Alec Hill in front turned due west and began to lose height. I looked down and there was a winking green Aldis lamp coming from a field near a small village. I was the last to land and did a very ‘ropey’ landing. Field only about 120 yards long!

“Lester, David and Moffat were all there, looking very dirty but quite fit. It seems David had spent most of his time fishing people out of the sea! They had landed O.K. about H-hour plus 30 minutes and with the help of David’s fluent French found an old farmer who showed them a field that wasn’t mined. They sent the map reference of the field back to the control ship for transmission to us, but a bomb hit it just afterwards and the officer who was to send the message was wounded and carted off. After they had sent it eleven more times it eventually reached us! Awful smell around here, hundreds of dead cattle all over the place. Had some soup from a self-heating can, refuelled the kites and we all took off for a

Flight landing ground Jack Sullan had established three or four miles away towards Bayeux . . . Peter and I slept under our 3-tonners, Terry under his aircraft, Jack, Mac and the boys in holes and ditches. Soon after dark a big firework display all along the beaches. Boche kites beating up the shore parties and landing craft. All night continuous streams of tracer going up—fell asleep watching it. We are four or five miles inland where it's comparatively quiet, only the odd shell coming over . . ."

A very different crossing to that depicted on the Bayeux Tapestry! Older readers of this story may remember or have had actual experience in the Dardanelles campaign of 1915. In this a strong naval force of battleships attempted to subdue the fire of shore batteries, both of coast defence and mobile field guns. Later, with our troops ashore, they attempted to give them effective fire support. The consensus of opinion after this campaign was that the naval gun used against a field army was most ineffective. But the Italian campaign, with its landings at Anzio and Salerno, showed how wireless, good inter-service training and air observation had reversed all this and had given to a maritime nation like ours not only the old ability to threaten invasion of the enemy's coastline throughout its length, but, once ashore, the priceless asset of powerful floating batteries which could participate in the land battle to a depth of perhaps ten or a dozen miles.

The air observation for the Armada lying off the beaches had been most effectively provided on D-Day and for a couple of days after by high performance aircraft of Naval Aviation. But for many reasons this type of observation could not be provided indefinitely. However, the early deployment of Air O.P. Units in the Normandy bridgehead ensured the continuance of observation and so helped to give the maximum value from these powerful floating batteries. This is what Von Rundstedt said about his unsuccessful efforts to 'contain' the Normandy assault:

"The flexible and well-directed support of the land troops by ships' artillery of strong English naval units ranged from battleships to gun-boats . . . the enemy had deployed very strong naval forces off the shores of the bridgehead. These can be used as quickly mobile, always available, artillery. During the day their fire is skilfully directed by air observers and by advanced ground parties. Because of the great rapid-fire capacity of naval guns they play an important part in the battle within their range. The movement of tanks by day in open country within naval gun range is scarcely possible".

So much for the enemy Commander-in-Chief's view of naval gunfire.

One of the authors well remembers watching an Air O.P. shooting a field battery in this somewhat dangerous sector about

D+4. It was a shoot done in the 'classic' method evolved at Larkhill in the Dark Ages of the movement, around 1941. The aeroplane skimmed the trees and the guns fired. As they did so the pilot pulled up into a steep climb, arriving at the top of it as the shells fell on their distant target. A few seconds of steady flight to observe and transmit the next fire order, and a swift swoop down to tree-top level whilst the guns were re-layed and fired. Here was a sector where leisurely flying at several thousand feet was 'not on'. Even some weeks later, when conditions were less exciting, Cobley writes of an operation by 51st Highland Division: "In support of the operation fifty-seven sorties were flown, including forty-nine shoots, all over the Benouville Bridge area. More than twenty-seven enemy aircraft tried to interfere. Captain Bawden and his rear observer, Gunner Passmore, were shot down by five Me. 109s. They made a safe landing, though Passmore was wounded. These five Me. 109s patrolled the area for an hour and drove the Air O.P. away, but they never pressed their attacks once the pilot had seen them and begun evasive action! Three Me. 109s were shot down by our flak, one by Spitfires".

The town of Caen, with its historic centre, its bomb-blasted dock area and its considerable northern suburb of modern houses, was captured on the evening of 9th July, leaving the enemy in possession only of the Vaucelles quarter, south of the river. The damage to the town was extensive and the streets were often choked with rubble. There was a great thrill in entering this place, for whose possession such a long and bitter battle had been fought and on to which the Air O.P. pilots had so long looked whilst observing fire in the bridgehead. One of the authors went down into it the morning after its capture and, wishing to see the tomb of William the Conqueror, made for the large church of St. Etienne. This was crowded with refugees, whole families seated around large rough tables, mothers nursing babies, old men hunched up on benches, older children playing around. The whole scene, in the dim light of the church, resembled some mediaeval painting. A year later, at the first anniversary celebration of the liberation of the place, he happened to be seated, during one of the many functions alongside the leader of the local resistance and commented on the church having been so full. The reply was "Oh, don't you know, there is an old Norman legend that so long as the Kings of England are on the throne, no harm will befall the church of St. Etienne, and in this actual case only one stone was dislodged by a shell".

Larger and larger concentrations of guns were turned on to important targets, and on 17th July Major Lyell, C.O. of 658 Squadron, conducted a shoot on forty enemy tanks lurking under cover;

in this the artillery of 12th, 30th and 2nd Canadian Corps with their supporting Army Groups R.A., say some five or six hundred guns of field, medium and heavy artillery, participated. This was possibly the largest 'battery' ever directly controlled by one man—certainly by a pilot flying a light aeroplane.

The chapter can fittingly be ended by quoting the somewhat bitter comment in "Lessons from the Normandy Front" of the German 10th S.S. Panzer Division, a very formidable formation. "But the greatest nuisance of all are the slow-flying artillery spotters which work with utter calmness over our positions, just out of reach, and direct artillery fire on our forward positions".



*An Auster Air O.P. taking off on a sortie from a front line air strip in Italy.*

The Air O.P. however had its off moments, for whilst working with the Poles a pilot of 651 Squadron slipped his map into the case, forgetting to rub off some old chinagraph markings. The following conversation was then heard over the wireless:

Pilot: 'Hullo 6, Target 123456 Over'

Regt.: 'Hullo 6, You say Target 123456, Over.'

Pilot: 'O.K. Over'

Regt.: 'Hullo 6, please check your map-reference over'.

Pilot: Target 123456, Over'

Regt.: 'Hullo 6, my officer he says you to wait while he points guns other way'.

The extraordinary conditions met with in the Burma campaign tested to the utmost the men and machines of the Air O.P. squadrons. The dense jungle hid everything from view and meant that Auster pilots had to fly at tree top level looking directly downwards. However, considerable use was made of A.O.P. squadrons particularly at Imphal when it was cut-off by the Japanese. One of the pilots recorded his impressions of life at Imphal and the sort of work the Austers were doing. "As the monsoon broke all our strips near the divisions became flooded, and we were washed out. We then had to work from the two main all-weather strips of Palel and Imphal, as any bulldozed paddy field was soon a foot under water. The airlift was now on in a big way, and up to 300 Dakotas, Skymasters and Wellingtons were flying in daily. The Flight helped unload these when they were not otherwise occupied. The traffic on the two strips (later only one, as Palel came under shell fire) became intense, and it was very difficult to get a 'green' from the watch office for a mere Auster when half a dozen Dakotas were circling to come in. As the Austers were returning from shoots and information sorties there was seldom much petrol left, and often a shoot was merely suspended till the Auster could return refuelled. On one occasion a pilot returned to refuel during a registration of a target with each gun of an entire divisional artillery, but was unable to get in. He fired a red Very light at the watch office and got in but was unable to get away again. Captain Fowler stormed into the watch office, where a pilot officer told him it would have to wait until the empty Dakotas had gone. He was asked in no uncertain terms if he knew that seventy-two guns were waiting for 'that little thing', as he described it, and it was suggested that his empty Dakotas could wait. They did, and from then on the Austers had priority over all but the Spitfires on fighter patrol."

After covering the Burma and Arakan campaigns "Unarmed into Battle" concludes with a review of the various types of Auster aircraft used by the services during the war.

A history of the squadrons follows together with a roll of honour both of which serve to show that Air O.P.'s through operating perpetually at the front line paid the price.

To summarise, "Unarmed into Battle" is a book completely worthy of its 25/-. Factual and exciting it gives readers the inside story, for the first time, of a weapon of war which when fully developed under operational conditions gave a degree of impact to the Allied offensive which was far beyond the imagination of the few whose foresight in the early thirties led to the formation of the Air O.P. units.

# Auster Agricola in New Zealand

NO MATTER WHAT TYPE of aircraft is produced for use by commercial operators, whether it is a jet Airliner or light plane the sequence leading to its entry into service follows a similar pattern: Market survey, Design, Construction, Testing and Production. When all these stages have been successfully passed it remains for the aircraft to be proven in the capacity for which it was designed.

This final stage is now well under way in the case of the Auster Agricola air farming machine which is operating in New Zealand on topdressing duties—one of the most arduous jobs an aircraft can do.

In the adjacent sequence of photographs the Agricola is seen on a typical New Zealand air strip during topdressing operations.

The aircraft in question is the second to be sold in New Zealand and is owned by Rangitikei Air Services Ltd., of Taihape, North Island.

Part of the Agricola's introduction into New Zealand consisted of a tour of topdressing sites when over 90 pilots flew the aircraft to assess its performance. All were delighted with its easy handling and the power operated hopper doors and flaps. This can be appreciated when it is remembered that a complete topdressing flight including loading with fertilizer, taking off, dropping the load, returning to the strip, landing ready for the next load, can take as little as 4 minutes.

Flying at between 75 and 100 feet above the ground the Agricola is flown day in, day out, dropping fertilizer over rugged hill land. An average



*Having returned empty, the Agricola turns into wind. The driver positions the loading hopper funnel above the aircraft. Meanwhile the hopper releases the load into the aircraft. Meanwhile the driver sets his flaps at take-off position. Loading complete the aircraft takes-off. Total time for the*

rate of deposit for a commonly used fertilizer is 1 cwt. an acre. The aircraft is 10 feet wide at a speed of 100 m.p.h.

After dropping each load the aircraft returns back to the airstrip at a possible down wind speed. On taxiing back to the airstrip, the aircraft is positioned at the down wind end. The aircraft has been fly loaded the truck's hydraulic system is in readiness for the aircraft. The hopper is lowered and the hopper door is essential for competition. The pilot is very keen—time saved for the unit can then be used without delay.

# w Zealand



and the loading truck moves in. The Agricola's filling neck and then the pilot carries out a cockpit check. When the operation is complete, the truck backs away and the operation—25 to 30 secs!

superphosphate, the most common in New Zealand, is 2000 lb. The Agricola lays a swath 82 ft wide at 10-15 m.p.h.

road, Agricola pilots fly full throttle and land if the runway is up hill. This saves the need for a loading truck which is positioned at the end of the strip. Whilst the Agricola is dropping, the ground crew have already filled the hopper. On the Agricola's return, the boom is lowered and the hopper filled from sacks. Speed of operation among operators is a direct result of the means money earned—this means on to the next job.



*Dropping superphosphate. Excellent forward visibility and highly responsive flying controls are but two of many features which must be incorporated in an aircraft designed to perform this job effectively.*



*After completing a topdressing flight the Agricola is brought in for another load of fertilizer. The sloping nose gives the pilot a superb view during the approach and even when the tail goes down on landing the nose remains horizontal—greatly minimising the risk of taxiing accidents.*



*The truck hopper is loaded at the end of the strip so that the Agricola can turn at the end of its landing run, and be filled immediately. The sequence starting in the first photograph is then repeated.*



# NEW PLANES

## FROM OLD

*A skilled, fully  
equipped Service  
Department is  
ready to tackle  
any type of  
Servicing to  
Auster aircraft*

“**A** FIRST CLASS JOB” was how the German pilot described the overhaul of his company’s Auster Autocrat just before he took off from Rearsby recently to ferry it back to Germany. His ten year old aircraft had been given a new life by the engineers of the Auster company’s Repair and Service department. This Autocrat was similar to many Austers operating in Europe which are not giving their owners the excellent service they are capable of due to poor maintenance. The aircraft in question was purchased second-hand in Europe and after a short period of operation it became obvious to the new owners that it had not been serviced to the proper standards. This in fact we are sure led to the breaking, in flight, of a rudder cable fortunately without serious consequences. After this occurrence, the German company wisely decided to ferry the aircraft to England and take advantage of the repair facilities available at Rearsby aerodrome. A complete overhaul was carried out and the pilot, who followed the work very carefully, expressed his surprise at the thoroughness with which the job was performed. The time taken for the overhaul was 10 days, a comparatively long period but caused entirely by the aircraft are maintained regularly by the Auster Service department aircraft’s poor condition due to neglect. It has been found that if

even an annual complete overhaul can be carried out in as little as four days. Regular maintenance ensures trouble free flying, costs less in the long run, *and maintains the aircraft's second hand value at a high level.*

One such owner who visits us regularly is M. Ray Delvert, known throughout France for his excellent aerial photographs—all taken from his Auster Aiglet Trainer. Once a year M. Delvert flies his aircraft from France to Rearsby for servicing. Prior to the aircraft's arrival a letter has been received from M. Delvert listing any particular items that need attention, this enables parts to be drawn from the stores so that work can start upon the aircraft soon after it has touched down. Between overhauls this aircraft builds up 1,000 hours of flying—more than double the amount done by an average Auster in Europe.

More and more owners on the continent are arranging for their aircraft to be flown to Rearsby—within the past few months aircraft from Germany, France, Spain, Italy and even Pakistan have been checked and overhauled.

Auster owners in the U.K. can take full advantage of these, the most comprehensive facilities for Auster repairs available, by simply dropping a line to the Auster Service department or ringing Rearsby 321, Ext. 6.

No job is too extensive for the department which is backed by the experience and capacity of the Auster company. Top overhauls, C's of A. including complete recovering jobs are all well within their scope, and provided notice is given, the period during which the aircraft is out of service can be kept to a minimum. For an average of C. of A. all the necessary work can be completed in about 10 days. Complete overhauls less recovering, take approximately 14-16 days, and overhauls necessitating recovering and doping can be ready within 21 days.



*M. Delvert, an aerial photographer, seen here in his aircraft, is a regular visitor to the Rearsby Service Department. His aircraft totals over 1,000 hours flying between overhauls and therefore must be kept in excellent condition.*

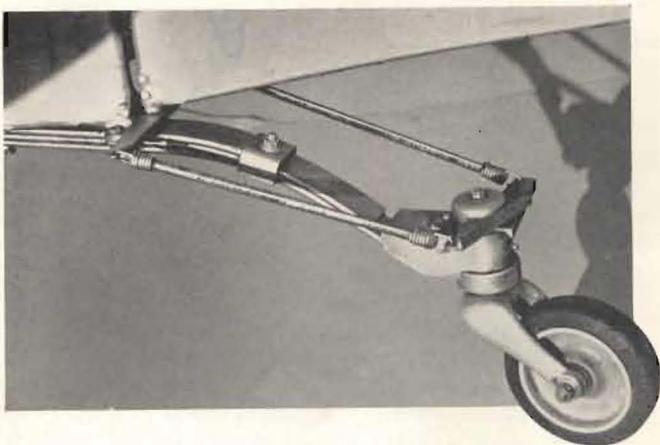
## Two **NEW** Accessories for **AUSTER** owners

These new additions to the range of accessories available for fitment to Auster aircraft will prove extremely useful to owners and operators of all types of civil Austers (not including the Agricola air farming machine).

### **The steerable fully castoring tailwheel**

A steerable tail wheel modification kit has been available to Auster owners for some considerable time and this unit greatly helped pilots during taxiing by giving a steering effect much more positive than the rudder/slipstream combination. Now, however, a new unit is available which, in addition to being steerable, *is fully castoring*. This permits the aircraft to be handled on the ground and rolled backwards—a manoeuvre not possible with the previous design.

This unit can be fitted quite easily to any existing tail wheel assembly whether it is steerable or not. If a steerable unit is already fitted only a new hinge block is required to make the existing tail wheel fully castoring. Owners should, however, possess the facilities to enable them to drill the bottom leaf spring thus enabling the new hinge block to be fitted. To replace a non-steerable tailwheel a complete kit is available and this too is simple to fit. This accessory is strongly recommended to owners who operate from aerodromes with long runways which necessitate the use of main wheel brakes for steering in cross winds. The steerable tail wheel



*The fully castoring steerable tailwheel can be fitted to any type of civil Auster.*

gives a two-fold saving, firstly on brake linings and secondly reduces main wheel tyre wear. Supplied as a modification set the cost is £22 10s. however, owners may have the unit fitted at Rearsby aerodrome at a total cost of £25 10s.

### ***The pneumatic tailwheel***

The simple solid tyred tail wheel which is fitted to all civil Auster aircraft has given excellent service during the long period it has been in service. However, it has a number of disadvantages which have been eliminated in the new type large diameter pneumatic tail wheel which is now available from the Auster Service Department.

Extensive tests have shown that this new tail wheel is far superior to the older solid type. Over soft ground such as sandy surfaces or muddy fields the flotation characteristics have proved excellent. In these conditions where a solid tyre would have been almost axle deep—with consequent difficulty in steering—the pneumatic wheel ran only one inch deep and gave no trouble at all.



*Much better taxiing characteristics result when the pneumatic tail wheel is fitted. This particular photograph shows a standard type although it can be modified to be both steerable and fully castoring.*

In fact proof of its performance comes from the British Army as this tyre is similar to the one fitted to the Auster A.O.P. Mk. 9 which has operated from ploughed fields.

The fitting of this unit couldn't be easier, only a spanner is needed to change the fork and instal a new larger fork and the new wheel. The total cost of this kit is £31 0s. 0d. Enquiries concerning either of these units should be addressed to the Auster Service Dept., Rearsby Aerodrome. Telephone Rearsby 321 Ext. 6.

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NOTICE TO SERVICE ENGINEERS  
TECHNICAL PUBLICATIONS

***Auster Civil Repair Manual***

Since our last announcement regarding the availability of this publication, our stocks have been completely exhausted. Arrangements for a reprint have already been made and further copies will be available within two to three weeks. Due to the demand for this Manual, operators etc., wishing to purchase a copy are advised to place their order as soon as possible.

The manual consists of two parts. Part One, which covers owner/user minor repairs, and Part Two, dealing with major repairs which need special jigs. After some unavoidable delay, we have now been able to complete a considerable amount of work on the leaflets comprising Part 2, and we hope to commence printing and distributing them in the near future. However, the manual is being issued minus Part Two and the cost is £5 5s. 0d., this includes of course, Part Two when it becomes available. All future additions to the manual will be supplied free of charge.

Orders and enquires should be addressed to:

The Manager,  
Publications Department,  
Auster Aircraft Ltd.,  
Rearsby Aerodrome,  
Leicester.

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# AUSTER SERVICE BULLETIN

Auster Aircraft Limited,  
Rearsby, Leicester, England.

Issue No. 42  
April/May, 1957

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## GIPSY MAJOR ENGINES AS FITTED TO VARIOUS AUSTER TYPES

It has recently come to our notice that certain owners and operators are not aware of De Havilland Engine Service Technical News Sheet No. G32 and G.M.10 No. 13 concerning corrosion of carburettors and fuel pumps. Sheet G32 refers to the Gipsy Major I engines and G.M.10 No. 13 to Gipsy Major 10 Mk. 1-1, Mk. 1-3, and Mk. 2.

For information we are repeating G.M. 10 No. 13 below. Bulletin G32 is nearly identical.

## GIPSY MAJOR 10 ENGINES—GENERAL CIRCULATION Sub Heading 5—Carburettor

GIPSY MAJOR 10 Mk. 1-1, Mk. 1-3, Mk. 2

### CORROSION OF CARBURETTORS AND FUEL PUMPS

Experience has shown that when engines of the above type are idle for considerable periods or are subject to a low flying intensity, there is a possibility that condensation will occur in the carburettor and fuel pumps resulting in corrosion.

Since normal flushing is insufficient to remove these products of corrosion, it is recommended that when aircraft, in which these engines are installed are flown for periods of less than ten hours per month, the following supplementary servicing should be carried out at monthly intervals.

1. Remove the filter bowl, filter element, fuel pump filter bowls and filter elements and carry out a close examination for water content and sediment.
2. Drain a small quantity of fuel from the tanks and check for water content and sediment.
3. Remove the jets in the base of the carburettor and flush out the jet wells by operating the fuel pump priming lever.

Upon removal of the jets, should signs of corrosion or gelatinous substance be noted, the carburettor should be removed and corrosion products carefully cleaned out before assembly and refitting the carburettor.



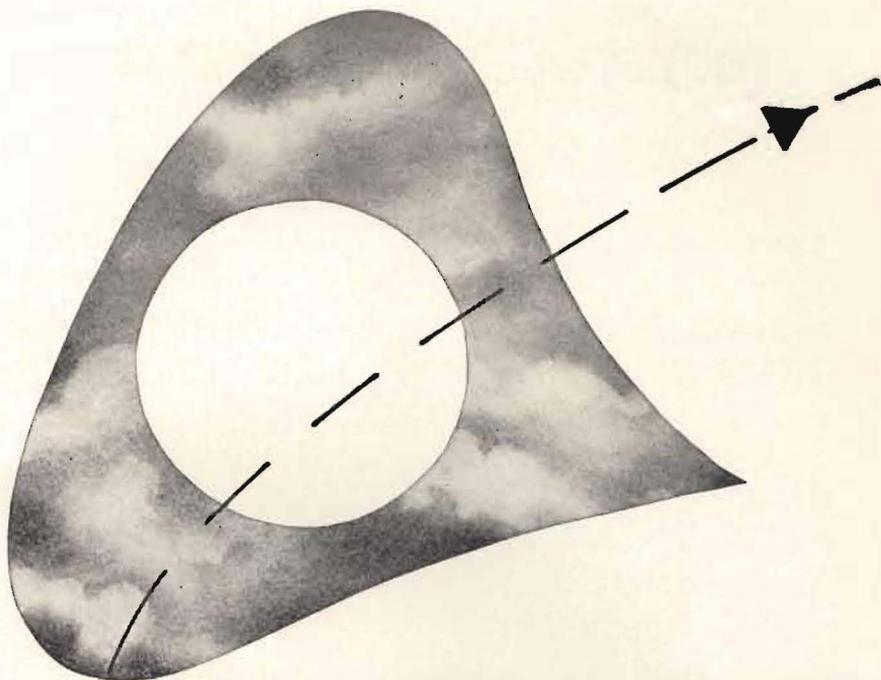
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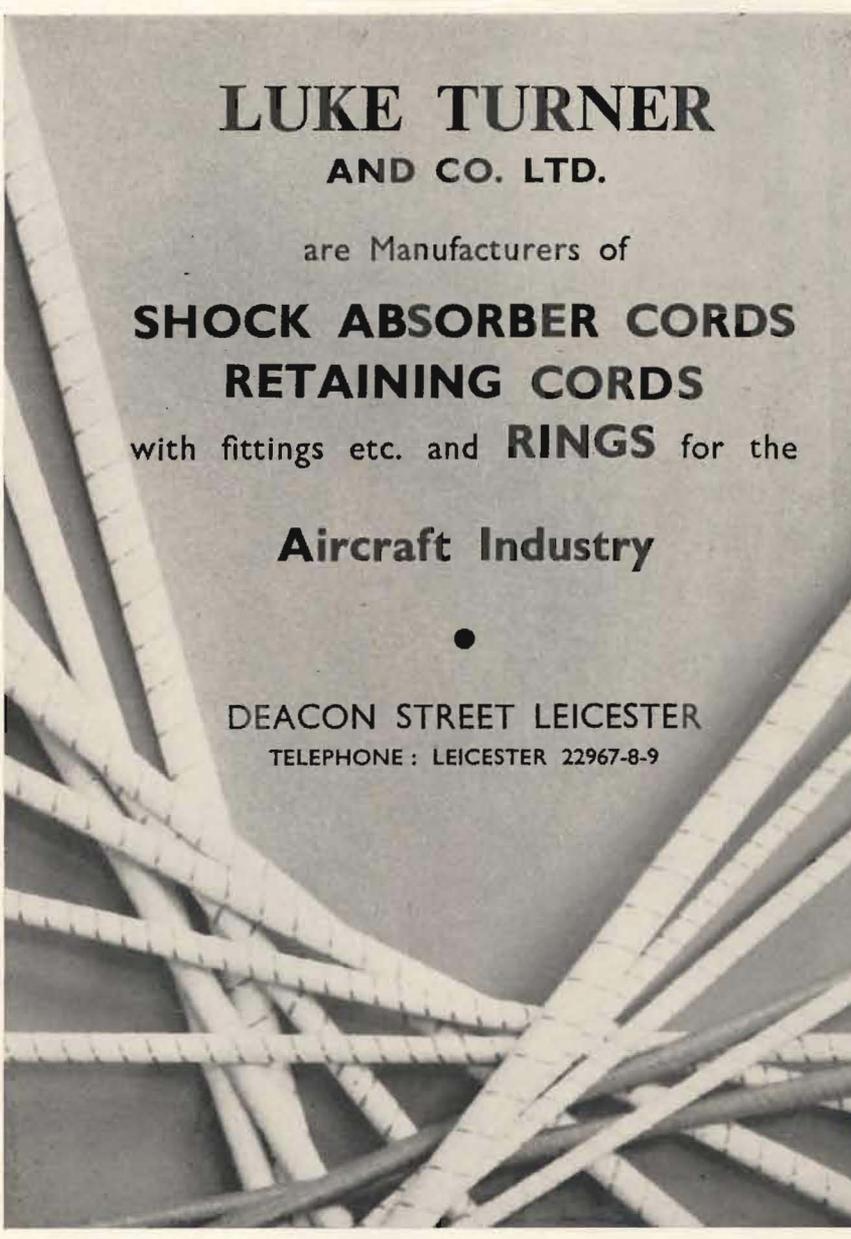
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