

THE RE8 CONTROVERSY REVISITED

By Alan Rowe



The POPULAR FLYING magazine was founded in 1932 by a former RAF pilot in WW 1,- the so-called Captain W E Johns. In this magazine the RE8 was described rather favourably in a section called '*Planes of History*', in which Captain Johns did not mention the many crashes that had occurred during its early service in 1916.

This provoked a keen reader - Gordon Tucker - a former Sergeant Air Mechanic who had witnessed many accidents with RE8s on flying training fields in England - to protest and commence a correspondence with the Editor. Its publication led in turn to many letters being received by the Editor from former RE8 pilots in defence of this aircraft's flying qualities.

Gordon's son, Stuart Tucker, is a member of the British Society of First World War Aviation Historians and has given permission for this episode in POPULAR FLYING to be republished by the Australian Society.

For many people the RE8 was not a pretty sight. To some it looked as if it had been designed by a Committee after a night out on the town! Others' thought it purposeful and workmanlike for its intended tasks, and a great improvement on the frail BE2cs it replaced! Nevertheless, after its special flying characteristics had been understood and a number of changes made to its fin size and shape, and to the contents of its reserve fuel tanks as a fire preventative, it became a sturdy warhorse for the Army Corps squadrons responsible for artillery spotting, photography and contact patrols. The basic stability of the RE8 for this work made it very vulnerable to attack by German fighters and many became easy victims for their aces.



The RE8. This photograph was probably taken at Celle following the Armistice, as there are no guns on the aircraft. Another RE8 is visible in the background. H.J.N. Rowe

Here then is the correspondence published in POPULAR FLYING with a much later comment by Dennis Perkins published in the Cross & Cockade International Journal.¹

" Mr Gordon Tucker, of Epsom, writes :- *"What I wish to write about is the subject of Planes of History, the R.E.8. I am surprised at what you say, particularly 'one or two people crashed in the early ones'.*

At Hounslow, in 1917, we had, I should think, two killed weekly in R.E.8's and invariably in the same sort of crash. The machine would rise to 500-1,000 ft., bank, and then spin, in nine cases out of ten catching fire. Both pupils and experienced pilots shared the same fate. During 1916 I was Beaulieu with a large training squadron using Avros, B.E.'s and Curtis's, and the whole time I was there we had only one fatal crash. After the war I went there for a holiday with an ex-airman friend. He took me to the churchyard alongside the aerodrome and there were rows and rows of graves of men killed whilst flying in 1917.

I said, 'That's strange, we only had one killed in 1916; I wonder why there were so many in 1917.' The answer was one word, 'R.E.8's.'

In view of this I do not think you can honestly talk of 'wild rumours about the R.E.8 being without foundation.' My own feeling is that hundreds of lives were literally thrown away when other machines such as the Bristol Fighter could have been used. I often tried to find out what was wrong with the R.E.8, but could not arrive at anything conclusive. I do think, however, that the extensions were weak - they never struck me as being a 'job'. I also think that the large area of keel-surface on the nose of the machine was not adequately compensated by the fin, which would be a contributory cause of spinning. It would be very interesting to hear of other readers, experiences."

Published in POPULAR FLYING, February 1933

"Dear Sir,

I thank you for your letter and very much regret this delay in replying, but I have only just returned from my holiday.

Needless to say I was very interested in your remarks and certainly agree with you. Early in 1917 I saw over thirty officers killed at Narborough in R.E.8's. I said "one or two" because the Harry Tate was, after all, one of the old brigade and I did not want to be too harsh. I will try and publish your letter next month to hear what other readers have to say about it.

Yours Sincerely,

(W.E. Johns.)
Editor. "

Letter to Gordon Tucker, dated October 7th, 1932

" *Last month I published a letter from an Epsom reader concerning the virtues or otherwise of the famous war-time artillery machine, the R.E.8. He rather suggested that in "Planes of History" I had tried to whitewash a black sheep, although curiously enough, many officers on active service swore by the R.E.8. Early in 1918 there was a minor revolution at Narborough. We had such a crop of fatal crashes in one month (more than 30 officers were killed - neatly all on R.E.8's) that certain officers refused to fly them. I was cheered by everyone on the tarmac when I wrote the last one off in 69 F.T.S. without hurting myself.*

This insubordination had a curious result. We held that the fin was too small, and Major Cox came down from the Air Board to prove that this was not the case. He arrived in a blue-painted R.E.8. "Fin too small, eh?" he said, and chopped the fin out of the tail unit of his machine altogether. He then took the machine up, looped it, spun it, and threw it about like a single-seater. Many officers will remember this event, which restored morale, but still left some people unconvinced. I am sure the extensions were weak, but I believe the chief trouble was caused by the way in which it would stall, quickly and without the slightest warning. It was nose heavy and spun viciously, so if you were within 1,000 ft. of the ground it was "Good-bye." Nevertheless, the R.E.8 was a very comfortable machine to fly while she behaved herself.

Several letters on the subject have been received, and while it is impossible to prove anything after the lapse of time, the following are particularly interesting in that they are from officers who flew the R.E.8 on active service :-

8, Hillsleigh Road, London, W.8.
January 22nd, 1933.

The Editor, POPULAR FLYING.

Dear Sir, - Having read Mr. Tucker's letter in your February Number with reference to the many fatal accidents which occurred to Pilots of R.E.8's, I feel that my experiences with this type may be of interest.

I was learning to fly at Doncaster in 1917 when these machines were given to us, and even at that time they had a very bad reputation for spinning into the ground and bursting into flames. So strong was the feeling against them that several pupils refused to fly them and returned to their Regiments. I was fortunate, however, in being of a credulous disposition, so that when my Instructor told me that the R.E.8 was really a fine aeroplane if properly handled, I believed him; nevertheless, I made up my mind that whatever else I did wrong, I would not in any circumstance lose flying speed when at the helm of one of them.

In due course I found myself with 42 Squadron R.F.C. at Bailleul, which had just received R.E.'s in replacement of B.E.'s. We were lucky in not having any accidents for a few weeks, but other Squadrons did, and our C.O., Major Kinnear, had the excellent idea of leaving the reserve petrol tanks empty. (Some pilots went so far as to fill them with Pyrene.)

These reserve tanks being situated right against the engine, were invariably stove in by the crash, and were the cause of the fires; as a result, although we subsequently had a number of crashes (invariably with new pilots), we did not have a single case of fire that I can remember

Another alteration which was always made in 42 was the addition of Flying Drift Wires from the engine bearers to the leading interplane struts.

Now, in reply to Mr. Tucker's remarks, I would say definitely that the majority of accidents due to spinning were the result of the pilot stalling the machine; I say this because in over 12 months on this type, I only had one serious mishap which was due to losing flying speed while approaching the Aerodrome in a gliding turn, when at about 70 ft. I felt the machine falling out of my hand, and being at the time rather inexperienced, I instinctively tried to hold the wing up by pulling the "stick" back, with the result that we fell out of the air sideways and crashed splendidly slap in the middle of the Aerodrome, writing the machine off completely, but owing to our low altitude, escaping with slight abrasions.

As a result of the expense, I decided to go more fully into the matter, and proceeded to carry out a series of experiments, needless to say, at a safe height, from which I found that it was possible to recover from stalls with not more than one turn of a spin, often without spinning at all, provided that the "stick" be pushed hard forward at once and suitable rudder given, when the machine would regain normal trim with a loss of height of 100 to 300 ft., according to the wholeheartedness of the stall.

In conclusion, therefore, I beg to submit, that although not a machine to take liberties, the R.E.8 was, in its day, a reasonably good design, for it had a ceiling of nearly 15,000 ft., could climb to 10,000 ft. in about 45 minutes and could fly level at 5,000 ft. at nearly 100 m.p.h. As I have endeavoured to show, the only troubles I ever had in over 450 hours on the type were entirely to foolishness or carelessness.

Yours etc.,
FREDERICK ELLAM.

197, Shinfield Road, Reading.
January 28th, 1933.

The Editor, POPULAR FLYING.

Dear Sir, - The design of the .E.8 was practically unchanged from 1916 until the Armistice, proof in itself of the efficiency of this type of machine. It certainly was not a suitable machine for a raw pupil to learn on, but then it was never designed for that class of work. If it was so prone to spin, as Mr. Tucker says it was, why didn't we crash every time we took off during our night bombing stunts in the summer of 1918, on the Somme front.

Yours etc.,
MAURICE WALKER, late 59 Squadron, R.F.C."

Published in POPULAR FLYING, March 1933

" 50 West Hill Avenue,
EPSOM
22nd February '33.

Dear Sir,

Re.- Planes of History, The R.E.8.

The experiences, as related in the March Issue of "Popular Flying" of those readers who have flown the R.E.8's during the War were most interesting, particularly the one of Mr. Ellam's. His letter, besides being entertainingly descriptive is full of common sense and his conclusions are quite logical.

Mr. Walker says "it certainly was not a suitable machine for a raw pupil to learn on but then it was never designed for that class of work". Whether it was designed for that class of work or not, it is a fact that pupils all over England with only a few hours flying solo to their credit were pushed on to them and that is what I meant when I said "that hundreds of lives were literally thrown away".

If it were possible to obtain statistics showing the number of pilots killed accidentally in respective types of machines, I venture to say there would be no need to ask if the R.E.8 were not a "Black Sheep". Its record would be an appallingly bad one.

The amazing thing to me is that all the Air Board could do to remedy matters was to send crack pilots to show what they could do with the machines. These pilots had done probably hundreds of hours flying in various types.

One might suggest as an equivalent Mr. Malcolm Campbell being sent to a School of Motoring to show a small army of prospective Austin 7 drivers what he can do with his Bluebird and telling them that they can do the same within the course of two or three weeks! Provided they don't break their necks in the interim!

Yours truly,
Gordon Tucker "

Letter to the Editor, POPULAR FLYING

" Such an enormous volume of correspondence has poured in on this subject that it is impossible to print more than a small part of it, so the "Shoot" must now be closed. The old art. obs. signal seems appropriate. -

One thing has been proved I think by this discussion; the supporters of the "Harry Tate" greatly outnumber its opponents so its good points must have outweighed its vices. Here are some extracts from letters received. Perhaps the most surprising is that from Mr. Gill, who supports his contentions by a list of 60 entries carefully copied from his log-book. Mr. Gill flew 52 different R.E.8's, and his letter is a fine defence of the maligned machine. He says :-

Oak Avenue, Todmorden, Lancs.

To the Editor, POPULAR FLYING.

Dear Sir, - It is interesting to find the old R.E.8 controversy reopened, and perhaps my own experiences may be of interest.

In the photographs which you published recently the lower one has the small fin and was obviously taken at an earlier date than the top one, in which the machines have the larger fin...The following day, a cross-country flight to Catterick was arranged (from Doncaster) and four R.E.8 pilots took off. Only three machines arrived, and on my return I found the fourth still smoldering on the aerodrome. The pilot had for some reason turned back and after making a false landing he and his passenger had shared the usual fate as he was going round to make another attempt.

A few days later, I was one of four Doncastrians who reported at Mason's Yard for overseas. The not very senior officer who interviewed us was frankly surprised that we had flown the R.E.8 and were still living. He hinted that a strike of sorts had occurred, many pilots having refused to fly the type. I was posted as a ferry pilot and took 22 R.E.8's across to St.Omer without a hitch. After the twenty-second machine, I was detailed for the "duty" R.E.8, which patrolled at different times during the day. This gave me an opportunity to throw the machine about, and I found that the R.E.8 behaved normally. Out of the 52 machines I delivered, I cannot recollect a single one which did not behave as a normal aeroplane. I think it was a most delightful type to fly.

Yours etc., J.L. STUART GILL,
F.O., R.A.F.O.

24, Winchelsea Road, Tottenham.

Dear Sir, - I am glad to have this opportunity to take up the defence of a much-maligned machine. As an R.E.8 pilot, I went overseas in 1917, after only 2¾ hours on the type. I flew them for six months in the Ypres sector, and from a difficult aerodrome (Abeele). I want to deprecate any suggestion that the machine had any inherent faults.

I could write indefinitely in praise of the old R.E.8, but I will only say now that they were a real pleasure to fly, and their chief attraction to my mind, was that which so many people did not realise, viz., that they were not fool-proof, but needed to be flown intelligently. That they were perfectly safe is proved by my log-book.

Yours etc., GEORGE EDDINGTON.
(Late No.6 Squadron, R.F.C.)

Totley, Sheffield.

Dear Sir, - At home and overseas, I flew about 200 hours on R.E.8's. I also flew that contraption of the devil, the B.E.2b. The R.E. was as comfortable a bus as one could wish for. In reasonably calm weather, she would fly "hands off" for an indefinite period.

The machines used for training had a fin area three times the area of the Service type. They felt the engine torque much less and were difficult to take off straight, at first. I think the trouble with the R.E. was that she had a very sharply defined stalling point. One could not "feel her going". In landing, there was practically no holding off; she settled down as soon as she came level. The fatalities described in your columns arose, I think, from over-estimating the air-speed when turning down-wind. Another cause of trouble in later days was the practice of taking pupils straight from D.H.6's, which were almost unstallable. I certainly would not classify the R.E.8 as dangerous.

Yours etc., G. CLIFFORD ALLISON.

Barcombe, Sussex.

Dear Sir, - I happened to pick up a February copy of POPULAR FLYING, and as an old R.F.C pilot, was most interested, especially so in the letter from Mr. Gordon Tucker.

I think my experience enables me to say a few words on R.E.8's. I graduated on these and was posted as Ferry Pilot, first to Lympne and then to Coventry, where the average monthly output was several hundreds each month. The only fatal accident we had were newly graduated pilots sent to fetch machines, and of these there were several each week. The regular ferry pilots had no trouble. After a time a number were turned out with a larger fin area, but personally, I found little difference and no improvement. We flew them at Coventry with no fabric on the fin, and even then there was no tendency to spin.

With an experience of over 300 hours on this type I can say that at no time did I have trouble or tendency to spin.

Yours etc., FRANK BALLARD. "

PUBLISHED in POPULAR FLYING, April 1933.

" Dear Mr. Tucker,

I am sorry I did not acknowledge your letter about the R.E.8, but I was so inundated with letters on this subject that I could hardly keep track of what was happening. I got your letter all right, but I really had to close the correspondence, because it would have filled the whole journal.

Yours sincerely,

W.E. Johns, Editor. "

Letter to Gordon Tucker, dated May 4th, 1933, in answer to his letter of February 22nd.

" Dear Mr Tucker,

I really am very sorry at the delay in answering your letter, but the size of the post bag is beginning to get me down. I am afraid the other letters about R.E.8 have now been filed away but if anything fresh comes in I will let you know.

Yours sincerely,

W.E. Johns. Editor. "

Letter to Gordon Tucker, dated June 2nd, 1933, in answer to a letter from Mr. Tucker in which he queried if there had been any further correspondence about the R.E.8.

" Denis Perkins writes from Darlington: In Biggles Learns to Fly the hero, on arrival at his School of Air Fighting, is told that seven pupils have been killed there in the last week. Whilst such assertions are permissible in a work of fiction, W.E. Johns seems to have been guilty of wild exaggeration, at the very least, in the claims he made in his correspondence with Stuart Tucker's father about the fatalities attributed to RE8s during his time at Narborough (Vol 29 No 4). Capt Johns 'saw over thirty officers killed at Narborough in RE8s', and goes on to say that there was a crop of fatal crashes in one month there with more than thirty officers killed - 'nearly all' on RE8s.

Even a superficial examination of the facts shows that these claims bear no relationship to reality. W.E. Johns was posted to Narborough on 20 January 1918 according to Barry Gray (Vol 24 No 1). Having then served at No 2 School of Air Fighting at Marske, he was in July instructed to report for overseas service. I assume that he was still at Narborough on 30 May when his friend Archie Farmer was killed, and I have, for good measure, checked the fatal casualties at Narborough, by reference to Airmen died in the Great War for the six months from 1 January 1918 to the end of June.

The results are as follows:

22 January:	BE2e of 69TS
13 February:	DH4 of 26TS (2 fatalities)
23 February:	DH4 of 26TS
8 May:	RE8 of 26TS
30 May:	RE8 of 69TS
3 June:	FK8 of 26TS
6 June:	RE8 of 69TS
16 June:	DH4 of 26TS

The two training squadrons therefore saw a total of eight fatal crashes with nine fatalities in six months, with only three involving RE8s! In the month to 23 February there were three fatal crashes, and then after a clear period of two and a half months, there were five fatalities over the next five weeks. I could see no fatalities for either 83 or 121 Squadron during the time when both they and W.E. Johns were at Narborough. There were only 47 fatal crashes of RE8s in the whole of Great Britain during those six months, and a number of these were mid-air collisions. The same source lists only 10 fatalities for the entire war for 26TS, and three for 69TS, so all of 69TS's fatal losses, and over half of those of 26TS occurred during those six months.

Since the days of Pemberton-Billing myths about flying training casualties have persisted, and W.E. Johns has clearly added his contribution. Whether he exaggerated the losses to create an issue for his magazine, or confused fatalities with the, no doubt, more numerous crashes, I have no means of knowing, but I am mindful that he had not been adverse to promoting to Captain for publicity purposes. I have no reason to doubt the accuracy of Chris Hobson's book, and feel that

the record should be set straight, bearing in mind the enormous discrepancy between the recorded fatalities, and Captain Johns' claims.

The original article on Narborough referred to the local vicar's assertion that 'we mourn six losses in eight days', but unless the vicar was mistaken, I can only conclude that the deaths occurred outside the period investigated, and related to other squadrons.

Incidentally, those who appreciate oddities should note that the three casualties in 26TS in February 1918 were called Law, Shaw and Laws. "

Letter in FABRIC section of CROSS AND COCKADE INTERNATIONAL JOURNAL, Vol 30 No 1 of 1999.

It is apparent that Captain Johns became quite overwhelmed by the volume of correspondence on this controversy and felt compelled to shut it down as ' it would have taken over the whole Journal '.

LESSONS LEARNT FROM THE CONTROVERSY?

It is clear that experienced RE8 Squadron pilots felt that the RE8 should not have been flown solo by pupil pilots with little flying experience, and especially those who were terrified of getting into the dreaded spin.

RFC flying training in early 1916 was not particularly well organised and many of the flying instructors were not trained as teachers - often being pilots home for a rest from the Front and not having the right temperament or commitment for this type of instruction.

Early recognition of these problems led to my father's elder brother, Lt Norman Rowe who was both a natural pilot and a born teacher, being retained by the Commander of his RE8 flying training school as a permanent instructor on these aircraft. Despite repeated requests for transfers to a front line squadron he was considered to be a more valuable asset to the RFC as a flying instructor on this "problem aeroplane". There were some consolation prizes however. A popular one was flying to many of the stately homes of England for weekend parties conducted for "Officers and Gentlemen" by the nobility of the time.



Lt H.J. Norman Rowe, an RE8 instructor attached to 24th Training Wing at Harlaxton, Lincolnshire, in 1918. H.J.N. Rowe

In those days pilots being trained for flying aircraft with air or water-cooled, in line engines would have progressed from initial lessons and solos on the 70 hp Henry Farman Rumpety to the 70 and 90 hp engined BE2a, BE2c and 2es. These were slow and highly stable aeroplanes and relatively safe for inexperienced pilots to manage. Moving up to the larger, heavier and more powerful RE8 placed them in an aircraft that required particular care during its take-off and landing.

With a large four bladed propeller to absorb the power of its 150 hp RAF 4a engine, this aircraft wanted to swing to the right as soon as the throttle was opened for take off. No doubt this would have surprised the pupil pilot at a time when he was concentrating on gaining sufficient flying speed to leave the ground. Today's pupil pilot is trained to immediately boot on some opposite rudder to counter propeller torque and to maintain a straight direction down the runway, but in 1916 this was a relatively new phenomenon. In an effort to overcome this, many RE8s were fitted with a bungee shock rubber cord to offset the left-hand rudder pedal. Designers of later, more powerful aircraft resorted to offsetting fins to achieve the same correction effect.

There are many references in WW 1 squadron histories of RE8s crashing during or shortly after take off, although some of those accidents may have been due to engine failures.

Those who had trained on aircraft with rotary engines such as the Avro 504, Bristol Scout, and Sopwith Pup would have already encountered their initial swings in direction as soon as the engine was blipped to full revolutions for take off.

The above characteristic of the RE8 was further compounded by the relatively small speed range between its cruising speed and its stall speed. Maximum speed unloaded was 102 mph so cruising speed would have been about 90 mph, and the stall speed was in the vicinity of 55 mph. This leaves a working speed range of only 35 mph and today's pupil pilot would know that it requires a great deal of concentration to fly within such a short speed slot, taking into account the effects of wind gusts and flying manoeuvres such as turns, side slips, etc. In 1916 add to these the weight of crew, bombs and ammunition (approximately 2,870 lbs total weight) and the effect of near misses from friendly and enemy battery shells, as well as the more direct attention of anti-aircraft fire!

The need for more practical information about the RE8's particular flying characteristics for new pilots joining his squadron led Major J A Chamier DSO, a former Commander of No 34 Squadron to issue notes for the guidance of his pilots which included the following comments,

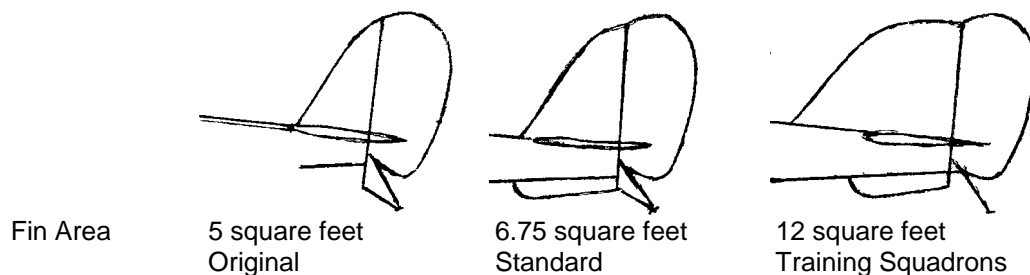
machine gives little warning of losing flying speed until it shows an uncontrollable tendency to dive which cannot be corrected in time if you are near the ground.

with engine on, aircraft will not stall at 50mph but not advisable to let speed get this low. Spinning, or more accurately a swinging tail will result. Spinning will also result if there is not enough bank for the amount of rudder used for the turn. Aim to get the rudder centralised as quickly as possible, but it will be stiff to move - so try to avoid excessive force.

with engine off, avoid gliding too slowly. At 65mph or below when gliding the machine will suddenly lose speed, particularly when turning over the field preparatory to landing as the braking effect of the rudder can bring down speed quickly.

Observers must not stand up to look over pilot's shoulder while landing as their wind resistance can cause the machine to stall.²

Problems arising from the adverse effect of the rudder were reduced by a slight enlargement of the main fin with its leading edge farther forward on the fuselage. A small underfin was added to the tail of the fuselage. 42 Squadron had bolted on a spare BE2e rounded fin to one of their RE8s and enlarged fins and rudders similar to a previous modification to a BE2e were used by training squadrons.



Royal Aircraft Factory trials were also conducted with balanced rudders and narrow chord elevators, but with no outright solution being achieved. The flexing of the large overhangs of the top mainplanes during tight turns also caused anxious moments for RE8 Observers!

'But for the failure of the 200 hp Sunbeam Arab and Hispano Suiza engine designs the RE8 would have been replaced by April 1918 with Bristol Fighters using those engines. The Air Board had to postpone this until September 1918 and the redundant RE8s had to soldier on until the Armistice'. In November 1918 the RE8 equipped 15 RAF and one AFC squadron on the Western Front, two Squadrons in Italy, and six squadrons in Mesopotamia and Palestine.³

Despite all of the problems outlined above, No 3 Squadron of the Australian Flying Corps carried out sterling work with their RE8s, co-operating with Australian troops on the Western Front, and were recognised as one of the most effective operators of this outmoded aircraft. An aggressive pilot and observer in a RE8 could surprise the enemy.

The most successful crew was Lts Pithey and Rhodes of No 12 Squadron. They scored twelve victories and each received a well earned DFC and Bar as well as surviving the War. Captain D H M Carbery, MC, DFC and Bar of Nos 52, 9, and 59 Squadrons was credited with six victories while flying RE8s.⁴

ACKNOWLEDGEMENTS

I thank Stuart Tucker for providing me with copies of the correspondence in the POPULAR FLYING magazine and by his father with Captain Johns. Alan Fraser is thanked again for his pertinent comments on my draft.

REFERENCES

1. Dennis Perkins in Fabric section's letters of Vol 30, No 1 1999.
 2. RE8 Profile Publication No 85
 3. RE8 Profile Publication No 85.
 4. Norman Franks 'Brigadier D H M Carbery, MC, DFC and Bar'
Cross and Cockade International Journal Vol 27, No 4 1996, pp 212-214.
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Another RE8 overturned on landing at Harlaxton in 1918. H.J.N. Rowe