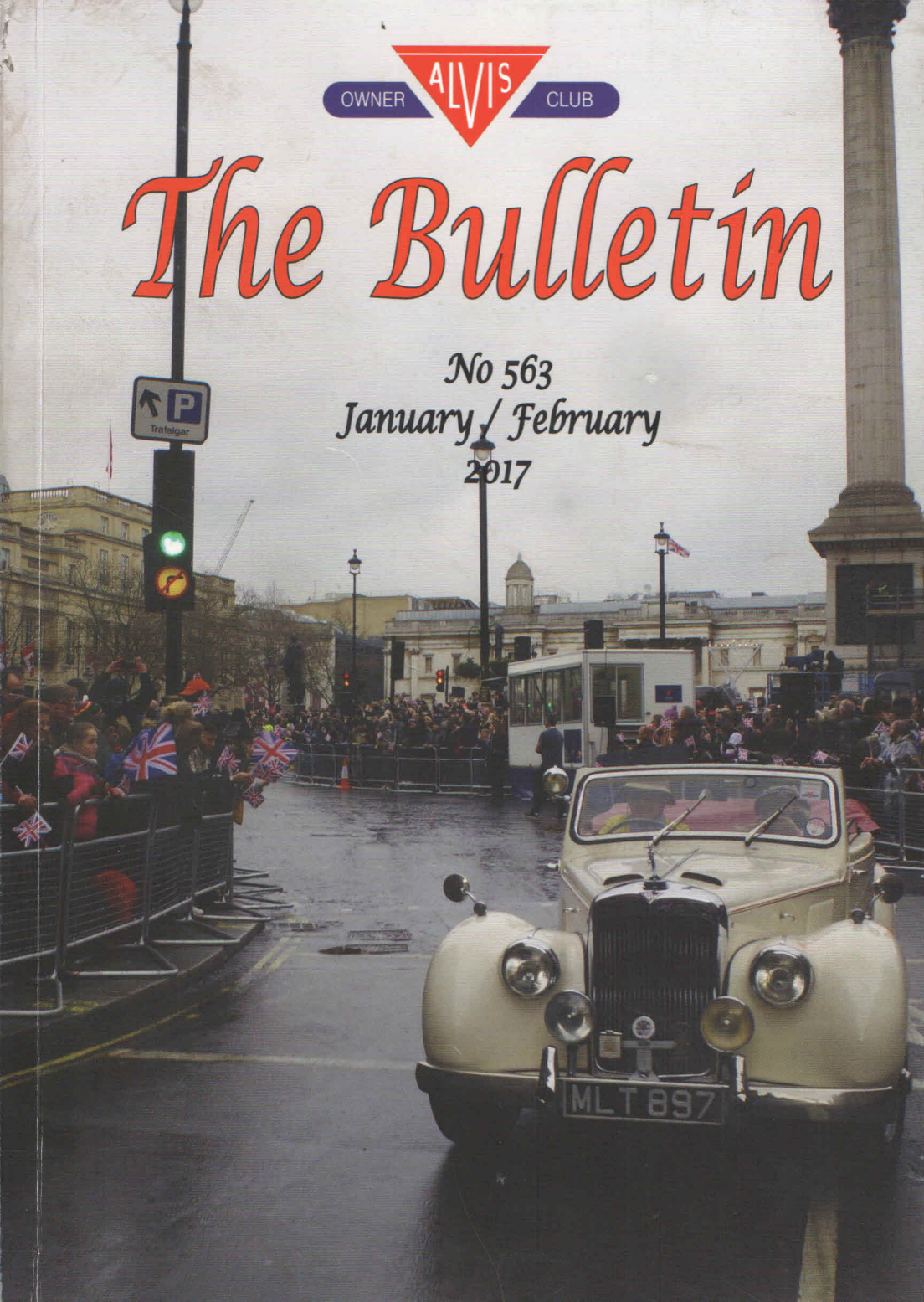


OWNER **ALVIS** CLUB

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Does your clock work?



Malcolm Kindell

Mine certainly didn't. But it does now. I have introduced a printed circuit to govern the balance wheel. Very clever stuff. It does not detract from the appearance of the clock and the operation is exactly similar. There are no external add-ons as the printed circuit sits within the confines of the body of the clock. You can even hear the rhythmic tick tock.

The Smiths Clock, which sits in the speedometer on my TA21, used to work very well but has worn out with time. Apologies for the pun. It has been repaired in the past but the repair option is no longer available from my repairer. So the Internet was trawled and lo and behold I found Clocks4Classics. Look it up for yourself, it's a very interesting site and explains exactly what you have to do step by step.

So a kit was ordered, stating clearly whether Positive or Negative earth was required. Two days later a little box arrived in the post, containing a very small printed circuit in an anti-static bag, a set of printed discs on sticky backed paper, a very small brass sleeve and some insulating sleeves.

The clock was removed from the speedo and carefully dismantled, on the workbench, on a clean sheet of white paper.

The problematic contact that switches the current, which drives the balance wheel to revolve backwards and forwards, is removed and discarded. It is this very contact which wears out

and is most often the cause of the clock failure. It is replaced with a light sensor on the printed circuit, which detects the passing of a black segment in a white self-adhesive disc fixed to the underside of the balance wheel. Clever electronics on the printed circuit converts the sensing of the black segment on the white disc to switch the power to drive the balance wheel. The electronics even have the ability to start the motion from the static position of the balance wheel. All very clever.

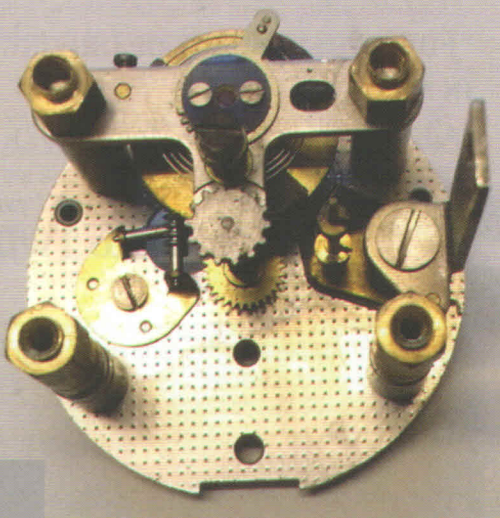
I have already successfully converted one clock and am now working on my second one. Regrettably this improvement does not compensate for any mechanical wear or solenoid failure. So the clock must be capable of working and be in relatively good condition. On taking the clock to pieces it is also advisable to clean and oil the components. Always use special clock oil and clean only with isopropyl alcohol. The process is extremely complicated, delicate and should only be undertaken if you have a steady hand, have good eyesight, have plenty of light and a lot of patience. You will also need the correct tools for the job.

Please note that this repair/improvement is only suitable for certain Smiths Clocks commonly used on Classic cars of the forties, fifties and early sixties. The example discussed is used on the TA21, TC21, TC21/100 and probably the TD21.

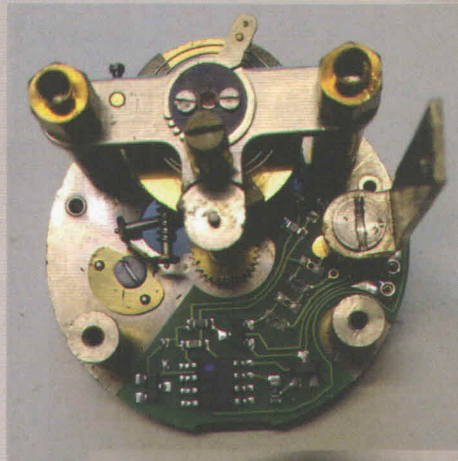
Below is a series of photos showing a few of the stages of operation.



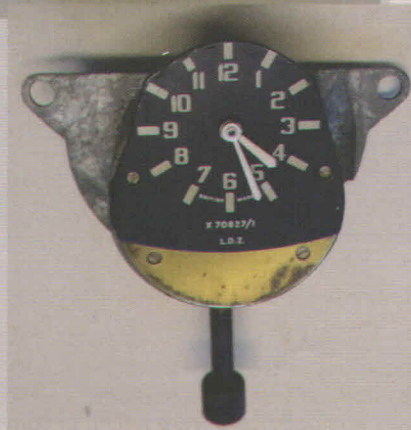
Above: Clock internal with body removed and solenoid still in position.



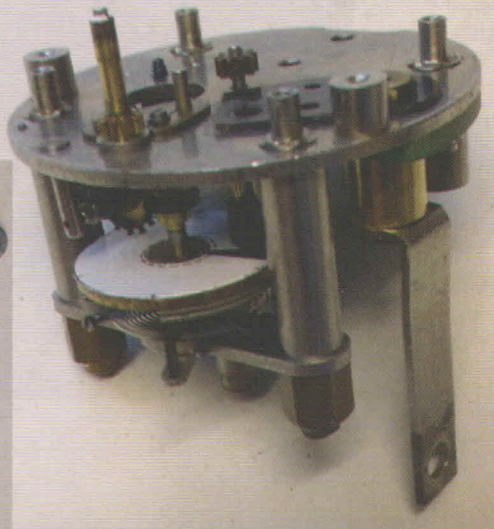
Above: Clock internal with solenoid removed, but with balance wheel contact still in position.



Left: Clock internal with new printed circuit installed.



Above: the completed clock before reinstatement into the 'speedo'



Above: Clock turned up the other way to show the underside of the balance wheel with self-adhesive white disc applied. The black segment on the white disc can just be seen.