

5.3 Coil Ignition Systems

A HAND CONTROL FOR COIL IGNITION SCOTTS AND OTHER MATTERS

Roger H. Wheeler

Having recently fitted a simple hand control to the distributor of my B'ham Scott, with very satisfactory results, I thought perhaps other members might be interested — if they have not already done so, of course.

The arrangement I have fitted is shown on the accompanying sketch and need not involve any permanent alteration to the existing set-up.

In fact I have drilled and tapped a 2 BA hole in the rear engine fixing stud to attach a button for the rubber return spring, but there are several other ways of doing this. I think the sketch is self explanatory but I would like to remark on the very big improvement in running by the use of the hand lever to augment the centrifugal advance.

Having gained an extra 20 degrees movement I have timed the ignition to fire just after TDC on full retard with the most satisfactory results when idling. The engine will now idle very slowly with never a misfire and very little noise.

However, what prompted me to fit the control was that my machine always seemed too advanced when set by the book and I had to compromise by retarding a bit.

The engine was inclined to grumble when pulling into a head wind or upgrade. The situation is now much improved as it is quite easy to sense the engine's requirements.

Any failure of the cable or return spring is of no consequence as one merely has to tighten the distributor clamp screw to revert to normal. The whole thing looks neat and is very easy to rig up.

I have modified an ignition lever to give extra length as was used for many years on B.S.A.s and I find it soon comes natural to use the lever as most of us older riders did anyway.

To change the subject, I also have a 1977 Silk, which, although it has many similarities with the Scott is very different to ride. Both machines have great appeal to me and make for very interesting motor cycling.

I have owned six Scotts in my forty-five years of riding and was delighted to return to the fold nearly two years ago after many years of other makes.

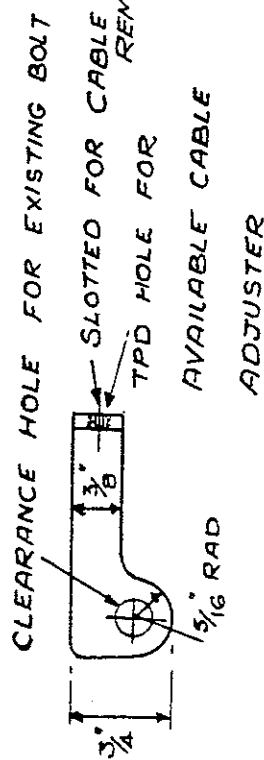
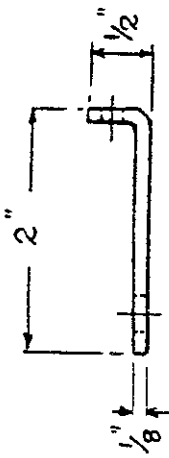
My present machine, a 1972 model, has given me plenty of heartaches, but I should hate to part with it. When everything is going right it is a delight to ride and causes great interest, being the only one that I know of in this area. I keep hoping that the Club will have a run in this district one of these days so that I can meet other owners.

The Silk, of course, has a much higher performance and goes roaring on long after the Scott would have cried enough. The lack of vibration, light weight, and excellent handling are really good. The only things I have done to it are to soften the suspension and fit Triumph pattern handlebars, and I now find it very comfortable. It has been no trouble and, judging by the plugs, keeps very clean inside. If I dismantle it, it is more likely to be out of curiosity than necessity.

Like Tich Allen I derive much pleasure from the exhaust note of a bike and in this respect I have to hand it to the Scott. The Silk is quieter and the noise gets left behind. However, on the rare occasions I let somebody else loose on it I realise how nice it sounds.

I find it a great pity that production of these fine bikes has had to be so reduced.

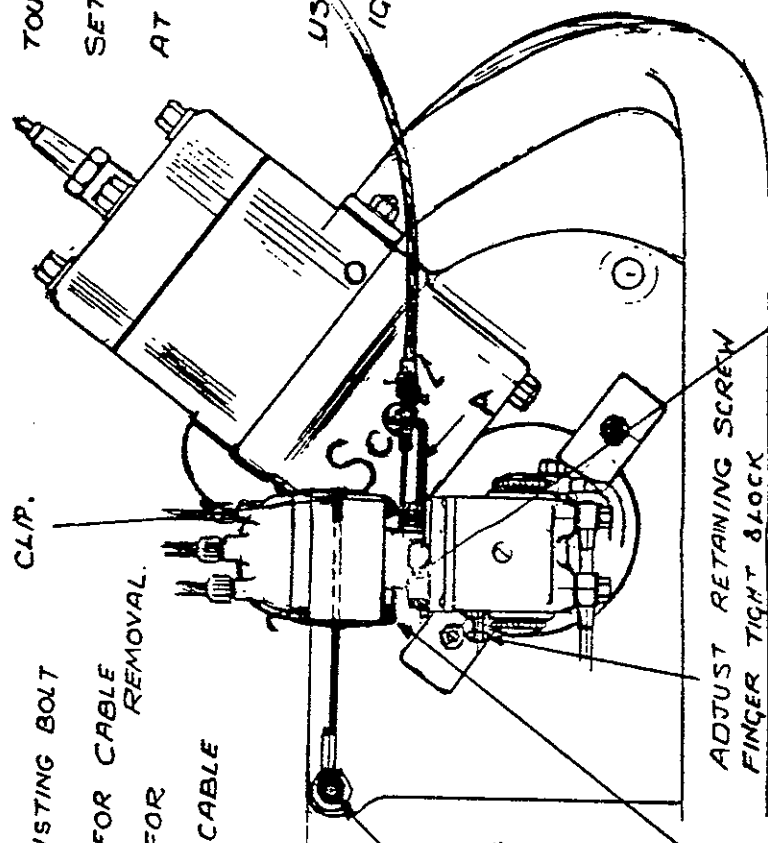
HAND CONTROL FOR COIL IGNITION SCOTT.



TIMING

RUBBER RETURN SPRING
NIPPED UNDER DISTRIBUTOR
CLIP.
SET DISTRIBUTOR ANTI-
CLOCKWISE UNTIL CASE
TOUCHES CRANKCASE &
SET POINTS TO BREAK
AT OR JUST AFTER TDC.

USE LONG BSA TYPE
IGNITION LEVER IF
AVAILABLE



DETAIL OF BRACKET A

1/8" DIA. RUBBER RETURN SPRING
ATTACHED TO SMALL SCREW
D^R/D & T^P/D INTO CENTRE OF
LARGE ENGINE FIXING STUD

ADJUST RETAINING SCREW
FINGER TIGHT & LOCK

FINGER TIGHT ONLY

EYE OF SPLIT PIN CAN BE USED
FOR CABLE ATTACHMENT.
ALTERNATIVELY, REPLACE SPLIT PIN
WITH 6 BA x 7/8" LONG SCREW & MAKE SPECIAL. MAPLE THUS -



"BRUM" AND LATE SHIPLEY (COIL IGN.) ELECTRICS

I recently acquired a Lucas/Scott publication dated July 1950. I can't think why anything to do with the Scott factory was published at that time, however it is a very useful six page booklet, picturing and listing all the electrical equipment, with serial numbers, plus a wiring diagram, for the 1949/50 coil ignition last fling effort from Shpley.

If anyone wants to pay me the princely sum of £1.50, to cover the cost of envelope, stamp, and photocopying, I will be pleased to oblige.

I hope Joe Lucas, Prince of Darkness, won't mind, after all it is obsolete stuff and nearly forty years old!

Whilst on this subject, many of you will be painfully aware that the DKX2A distributor does not last very long on a Scott, presumably due to having to spin at full engine speed instead of half speed. Well, all is not lost if your distributor is "cream crackered". The same piece of kit was fitted to a few other machines of the same era, notably the Royal Enfield vertical twins (Meteor, etc) and Burton Bike Bits, of Burton-on-Trent have a few new ones in stock, (price last year £55) from their Royal Enfield spares cache (ex-Matt Holder). If forking out that kind of money does not appeal to you, it is possible to fit new bushes which I did in 1982 when restoring my 1950 Flyer.

It is also possible to get all sorts of spares for them from car auto-jumbles, because identical distributors (apart from four cylinder cam and cap) were fitted to various cars from the 1930's onwards (notably the Ford Model Y "Tudor") as the DKX4A.

Beware the pattern distributor caps currently on offer (including most from the club spares scheme!!) They don't fit, at least not without a lot of tedious work with needle files and emery paper.

The monstrous "Special Equipment" dynamo number MC45L also has its little foibles but they are very simple and easy to work on. Again we are fortunate that another manufacturer used it, although period literature would have you believe it was only for Scotts. In fact the Sunbeam S7 and S8 had a remarkably similar dynamo, and you can get new brushes etc., from Sunbeam specialists Stewart Engineering, together with all sorts of period electrical bits common to both Sunbeam and Scott. Prices of some bits such as new ignition/lights switches are rather daunting, but at least the stuff is available if you know where to look.

Unfortunately all but the earliest "Brum" Scotts had Miller electrics, and they really are difficult to locate spares for. If it is of any help some Velocette gear can be used, notably from the Valiant flat twin, and of course Lucas distributors can be used instead of Miller. You can also fit a Triumph 3TA/5TA distributor; (Lucas 18D2) not exactly the World's best-engineered distributor, but a nice neat, slim effort compared to Miller or the Lucas DKX2A. My Birmingham Scott had one and it was always a first or second kick starter, and it went well, so they can't be all bad!

You now have no excuses for lack of sparks or lighting on your "last fling from Shipley" or Brum Scott.

B.M.

POSTSCRIPT: since penning this article I have been pleased to see that Ryan Holder has turned up a cache of both Lucas and Miller electrical spares for post-war Shipley and Brum Scotts. Great stuff!

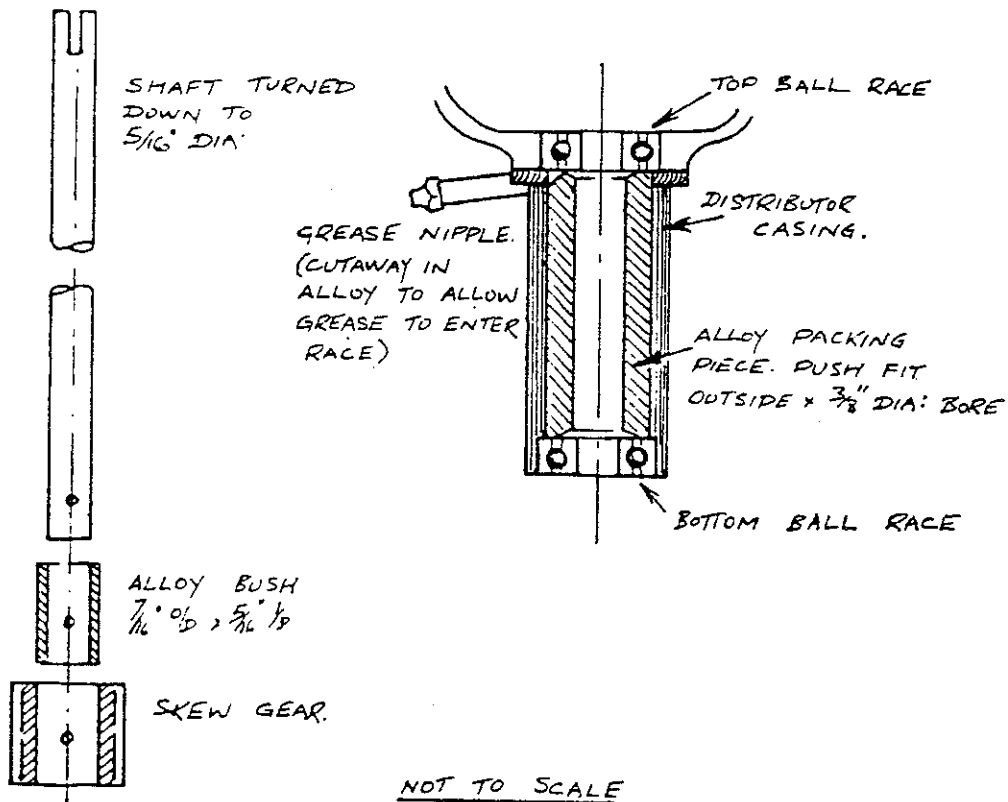
DISTRIBUTOR MODIFICATION

By *Modifier*

Being troubled with erratic firing all through the rev. band for some time, I discovered when adjusting the points, that the slightest pressure on the rotor increased the specified gap of .010"—.012" to .062". After carrying out the following modification, I find that the firing is now perfectly even, and the exhaust note once again, gives the proverbial 'Yowl'.

On dismantling the distributor, I found the top bearing and shaft badly worn. Apparently, neither had ever been renewed since they were made in 1949, certainly not by me. Although I did give it a few drops of oil from time to time, this I think is inadequate. I could get a new bearing, but could I get a new shaft? After a lot of thought, I decided to fit ball races, which would eliminate the shaft wear, and new ball races could be fitted much easier than a plain porous bronze

DISTRIBUTOR SHAFT MODIFIED



NOT TO SCALE

bearing, once the distributor housing etc. had been modified. The shaft was turned down from 7/16 ins. to 5/16 ins., and the skew gear bushed with aluminium. The distributor housing was recessed top and bottom to accommodate the following ball races:

Fischer Bearing No. R8, o/dia. .866 ins i/dia. .3125 ins., width .275 ins.—2 off. Between the races, a piece of aluminium tube is fitted to retain H.M.P. grease in the top bearing, while a grease nipple is fitted for renewing grease.