Lagondaforum: M45 Distributor Skew Gear

M45 Distributor Skew Gear

Written by Mark at Dec 16, 2018 10:57 pm

I have discovered the skew gear on the Lucas distributor of my M45 is badly worn. There are of course two of these gears so I guess the one on the drive from the dynamo is also worn.

Could anyone advise how these gears are secured to the distributor shaft? It looks like a roll pin?

Secondly has anyone replaced these gears? I believe the part number is Lucas 421439. They available from the club. Any advice on fitting?

As ever grateful for any advice.
Mark

Re: M45 Distributor Skew Gear

Written by M70 at Dec 17, 2018 7:45 pm

Dear Mark, I refurbished my distributor last year. yes the Club does the gears Part Number: GRS402 £69.62 ex VAT @ 20%. I replaced the small gear and checked the backlash and decided that was fine. The improvement in running with a good distributor was significant. On the Irish Rally this year both my "good" BTH magneto and spare failed and I then did around 500 miles on distributor alone, something that wouldn't have been possible before. I used the Distributor Doctor for the dizzy and I was pleased with the service; the gear is secured by a roll pin, important to get the mesh right so you may have to adjust on the shaft (don't assume it is correct). Good luck Stephen

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Re: M45 Distributor Skew Gear

Written by Mark at Dec 17, 2018 9:10 pm

Thanks Stephen, very helpful.

I have managed to buy a complete new old stock Lucas Distributor (minus skew gear) that with minor modification will do the job nicely. It is a model DZ6A which is the same as the one that has been on the car for many years. This has major play at the cam bearings, so much play that the contact breaker gap is all over the place and probably explains the occasional misfire and not running cleanly. Add in the razor sharp worn teeth on the skew gear and it has little chance of operating properly.

Did you remove the dynamo to check the larger skew gear? If so did you have to remove the exhaust down pipe to get it off?

Grateful for your help on this

Best Regards
Mark

Re: M45 Distributor Skew Gear

Written by M70 at Dec 18, 2018 5:39 pm

Mark, I was interested in the backlash on the cam, the distributor bearings were also shot as well as it being a "cheap Chinese copy", I didn't need a dial indicator to tell me it was shot but my gears were OK. On advice from Martin Jay, Distributor Doctor, I went for a 23D6 with the advance and retard welded up. I put a LED inspection lamp to check the look of the dynamo gear and then used to engineers blue to check the mesh. Taking the dynamo off is relatedly simple but it you still can't see the gear mesh. If you are replacing one gear better to replace in pairs obviously. I always thought/was told, you lost 20% of the power with no magneto, all I can say is the performance was identical without the BTH mag. Since then I have fitted a Scintilla GN6 and that has been a huge improvement too. I have the original Rotax distributor and BTH magneto wrapped-up under the bench. I wish I had put a decent distributor on the M45 years ago! Best wishes,

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Re: M45 Distributor Skew Gear

Written by Colin M34 at Dec 21, 2018 9:18 pm

Hi Guys

I have been noting and enjoying this thread and am pleased that Stephen is getting good results from a Scintilla GN6. I am as well.

Keep this thread rolling, it is very useful.

M34

Re: M45 Distributor Skew Gear

Written by Mark at Dec 21, 2018 10:40 pm

Thanks Colin,

I am most interested in how Stephen's distributor had backlash when his skew gear was ok.

My guess is that it was the cam that was twisting on the distributor shaft spigot. This is fine if the automatic advance is used as it enables the weights to throw out as required. However, as the M45 has manual advance and retard the cam has to be permanently fixed to the spigot after the weights have been removed or welded up. It seems likely that whatever was done to achieve this on Stephens 'original' distributor had failed. Hence the need for the replacement correctly converted for use on the M45.
No doubt Stephen will advise if this was the problem...plus as he says it was also a 'cheap Chinese copy'

Of course wear in the skew gear has to be significant to have any significant effect on running as it is simply driving in one direction at a constant speed. Grateful for views on this assessment.

As for the Scintilla GN6 ...if anyone has one available I would be most interested! (Y2 in the register)

Best wishes
Mark

Re: M45 Distributor Skew Gear

Written by Colin M34 at Dec 22, 2018 9:35 am

Hi Mark,

I think your assessment is spot on.

My distributor has automatic advance which I removed and locked up. I also have an original distributor I will put on in due course.

Cheers Colin

Re: M45 Distributor Skew Gear

Written by M70 at Dec 22, 2018 9:51 pm

Like so many things in life I think there are a number of factors that often work against you. I firstly tried to get the original Rotax to work but there is a shortage of reliable consumables and I suspect the distributor cap is a weakness. Marin Jay's advice was to go with a new distributor complete where the cap, condenser, points are all known to be good, I agree with Mark that as the shaft is in constant drive you would anticipate little variation but in practise I wonder. Anyhow the result is the key, and I am delighted, and the predicted 20% performance drop was not evident and even under load

"distributor only" was not a problem. The other aspect that need some work was to make sure the advance and retard for thew magneto and distributor was matched, in my case taking all the slack out distributor cables and levers. What you need to achieve is a reliable stop when fully advanced. I do think all the effort was worthwhile. Regards, Stephen

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Re: M45 Distributor Skew Gear

Written by Colin M34 at Dec 23, 2018 6:12 pm

Hmm. Following a useful conversation with a fellow M45 owner I set about searching for new old stock distributor caps for my original Rotax distributor which is not currently on the car. I would like to give due credit without mentioning his name so as a clue this person is a retired banker with a red Lagonda.

I would concur with Stephen that a new cap is essential and so far I have found a couple that fit but cannot advise on the reference number. I just walked around Beaulieu and tried loads out. I think they will be findeable for a few more years but are getting scarce.

I also concur with Stephen's other comments. I have two identical timing lights and check the timing with one in each hand. The advance /retard control has to properly synchronised with no slack in either one.

Stephen's comment about it all being worthwhile is also spot on. I also get very little 'mag drop' when I switch from one to the other so you just need to be patient.

Getting this right is good engineering and satisfying when sorted.

Colin
