

## Distributor Information

The following question was asked.

At a recent Healey gathering two of our members were looking for suggestions on what to do about a slight movement in their distributor shafts. Can these be rebuilt? If so how and by whom? Does anyone offer new or rebuilt distributors? One is a BN6 distributor and the other a BJ8.

Here are the responses:

AH spares has new BJ8 distributors, I don't know about BN6.

You can restore a distributor by boring out the housing and press in a bronze sleeve, which is reamed to fit with the shaft.

I agree with Karlsson; there is a bushing that can be replaced and reamed to fit the shaft. I suspected mine was worn and sent it to British Auto Electric, 2722 E. Carnival Ave. Anaheim, CA 92806, Ph. 714-630-1074. He checked out my dist., cleaned it, replaced the vacuum assy. which was leaking; did not find that the bushing was worn so I was ok on that issue.

He (his name escapes me at the moment) also put my dist. on one of those old Sun dist. machines to set up and/or check the mechanical advance. I'm happy with his service.

I used to be very concerned about distributor shaft wear and spend all sorts of time replacing the bushings in distributors. Then I got a Allen Syncograph distributor test machine. Amazingly we found that even very badly worn distributors had very little timing variation. In fact more than 2-3 degrees (crankshaft) of wander at even very high RPM, where the condition seems to be worst, is something we have never seen.

When you consider that the design timing setup for these engines was based on this type of fuel at this compression ratio with this un worn cam etc. etc. 2-3 degrees is probably of no consequence.

That is my 2 cents worth.

Hope you get an answer. If you do, could you post a note on this list?

The shaft on my distributor is quite sloppy. So much so that I was unable to adjust the points and get a dwell angle above about 25 degrees. This does not allow the coil to fully charge and deliver as hot a spark as it should. Rather than spend \$300 for a new distributor, I installed an electronic ignition (out of sight) that uses the stock points only for a trigger and deals with the dwell angle electronically. However, I'd like to still fix my distributor.

I believe at one time Ted Schumacher could rebuild the distributors. You could give him a try at T S Imported Automotive, 404 Basinger Road, Pandora Ohio 45877, (419) 384-3022

I took my worn '66 spitfire distributor apart many years ago and had a new bushing made for it at a local machine shop. Didn't cost that much back then. Only problem was that they didn't use an oil impregnated material and it lasted about half way between Texas and Indiana. Except for the total purist, I would recommend one of the new electronic ignition kits which fit inside the distributor. They're only about \$100 and they keep the look original.

Holden Vintage Spares in England sells Lucas stuff. Years ago they had a large stock of NOS bits, but these have been sold off and Lucas is not making reproductions and other bits as they used to. Holden offers Dist rebuild services and perhaps you could get a bushing from them .

The Lucas part number for the 100 ans Sprite is 419430. My parts book doesn't list a part number for the 100-six and 3000.

Give Holden a call and see if they can supply one for you. Their number is:

Phone: 011 44 1885 488 000

Fax: 011 44 1885 488 889

The original distributor in my BJ8 started breaking rotors due to shaft wobble and contact between the rotor and the dizzy cap terminals. The engine seemed to run fine when it was running, but once it just died due to a cracked rotor; and another time when it wouldn't start I found another cracked rotor. After putting in a brand new rotor and trying to start it, it broke the new rotor in half.

I solved my problem by installing a Mallory Dual Point distributor (\$175 at the time, versus \$400 plus for a Lucas dizzy, and I couldn't wait to find someone to rebuild the original).

I did the math on this one some time ago, being faced with the same dilemma that you were.

A Lucas 6 cylinder rotor transcribes a circle 2.140" in diameter. The inside distance between the terminals in a cap is 2.207" . This gives a radial clearance of 0.033". That is a lot of bush wear.

Further investigation in our case determined that the distributor shaft was bent. How do you bend a distributor shaft ? Have the advance weights assembled incorrectly. Nuff said.

On a lot of the distributors I've seen that were suspected of bushing wear the problem was not in the base bushing, where the shaft runs through the body of the distributor, but in the top, where the cam had developed excessive play on the top of the shaft. Any side-to-side movement of the cam in excess of .006" will result some dwell

variation. If that movement is not evident with the cam removed but is obvious with the cam in place then the cam is the culprit, and replacing the cam will usually solve the problem. I've seen this simple solution take a dwell reading that was all over the scale and change it to one that had no more than 1 1/2 degrees variation over the entire RPM range. So what I'm saying is check both ends when diagnosing wear.

You can get the post BJ8 Lucas distributor with custom made ignition curve for less than \$ 175 at Demon Tweaks UK. It serves better than a mallory both for road and comp, especially since it accepts an electronic ignition conversion.

HOWEVER, what I have found in LOTS of different LBC's is that that "drive dog" has decided to accept some uneven wear( mostly due to incorrect insertation into clamp, fractures in housing, or just plain incorrect install of dist./clamp -add a "gasket" to stop "oil leak"). Instead of sitting correctly in the drive, it "bounces" which gives real interesting readings and unfortunate results.

The drive (female) itself seems to not change, but the dizzy "driving dog" does.

I'm going to give you my 2 cents worth on distributor bushes and reamers so here goes. If your distributor bushings are worn and need replacement then drive the old ones out and replace them with oil impregnated bronze bushings that you can buy from good auto supply stores. These bushings come in many sizes and lengths and will cost around \$3.00 each. Then take the distributor body and shaft to a reputable machine shop and have them line bore the bushings in a lathe. It should take them around one hour so your cost will not be too much and they should be able to hold a nice tight tolerance so the shaft is snug but not tight.

If you are looking for reamers then go to a machining tool supply store. They will be able to get you just about any size that you could want and then some. If you wish to ream a double bore at the same time (eg kingpin bushings ) you can purchase what is called "shell reamers" and make your own double, triple etc reamer. A shell reamer looks like a normal reamer without the shaft ( hollow through the middle ) and you put the touch on a friend with a lathe to make you a shaft of the appropriate O D and length. When the reamers are assembled on the shaft, lock them in place with a spot of weld. I have made two double reamers this way for boring and bushing the shaft bores on Armstrong shocks and the shell reamers averaged \$45.00 each Canadian and were .75-1.0 in. od. So if you can get your machining done free you can build your own kingpin reamer for around \$60.00

US... good deal eh

