

March 2015

Gazette



The official Mercedes-Benz Club
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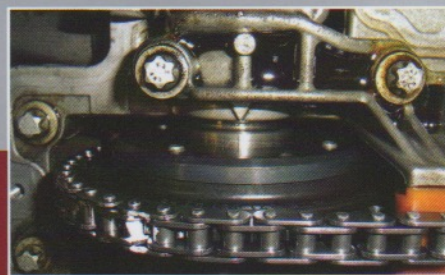
In this month's issue



Schloss Dyck
Classic Days



C63 AMG coupé Black



M271 timing chain



Moral: never try to predict the British weather!

Restoring a Ponton starter motor after the floods

by David Robertson

We live on the banks of the River Loddon. We're used to floods and our house is built on a platform a metre off the ground. Over Christmas 2013 the water level was steadily rising so I put our 1959 180a up on blocks and jacks. All was fine and over the New Year the waters started to subside. Then we went abroad for a week to a hot, dry country.

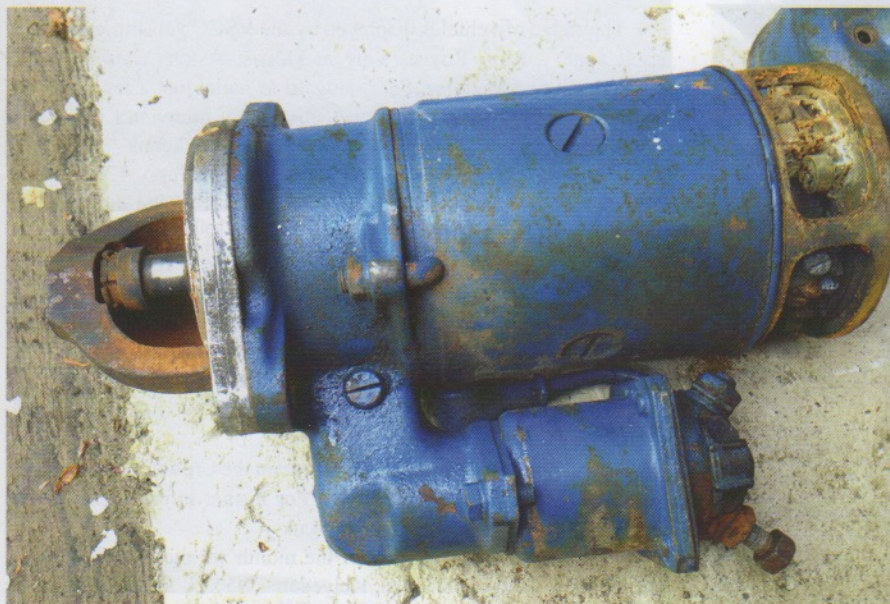
Suddenly the UK weather worsened and the river level went up dramatically. The car was flooded. This flood was exceptionally high and many in the Thames Valley suffered much more than us, but the worst thing was that the water stayed and stayed and didn't subside properly until March. Some lower parts of the car had therefore been under water for more than two months by then.

When the place finally dried out enough to start work, I took out all the seats and carpets and washed them thoroughly – no lasting damage. Then I bought an engine

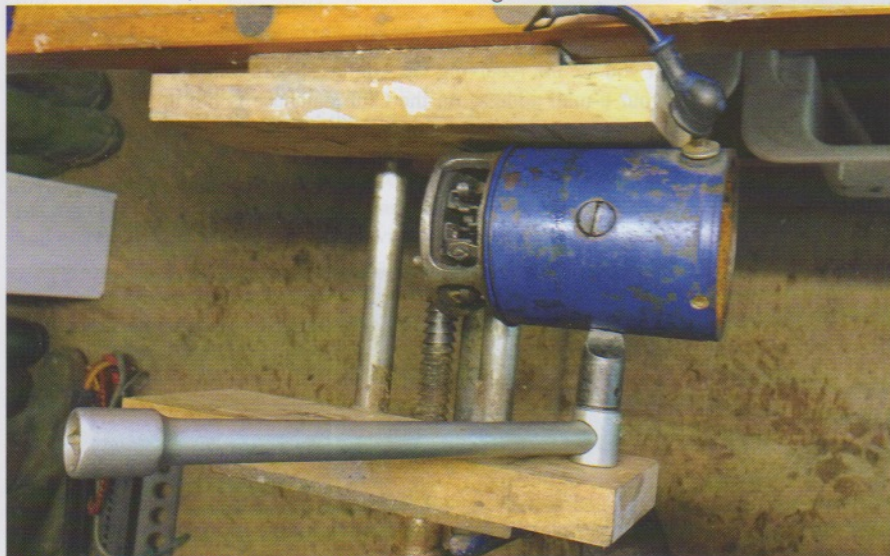


Lifting the engine was nothing like as difficult as I'd expected.





The Bosch EED 0.8/12 R32 starter motor for the right-hand-drive 180a.



The four field coil screws were very tight.



All the components of the starter motor laid out.

hoist, replaced the clutch and had the transmission restored by a professional.

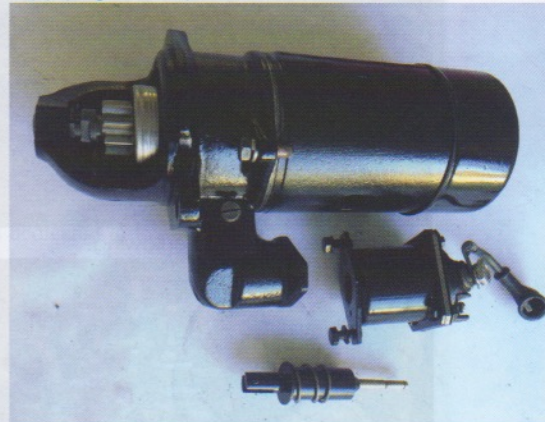
Not surprisingly, the starter motor was in pretty bad shape so I consulted Club Technical Director Jeremy Stevens and decided to strip it down and rebuild it. I opened it up and cleaned everything. There was no serious damage apart from to the pinion assembly ('bendix'). This is a one-way or 'sprag' clutch containing

metal rollers which lock the drive when the starter is driving the engine and slip when the engine speed rises above cranking speed (http://en.wikipedia.org/wiki/Sprag_clutch). The penetration of water had caused internal corrosion which wrecked the drive. Russell at Mercedes-Benz Brentford managed to track down a new bendix, brushes and bushes.

I bought a 100w soldering iron to release



Applying new tape to the field coils.



Trial reassembly.

the main connection to the field coils and the two connections on top of the solenoid. The tape on the field coils had perished in a few places so I cut the old stuff off and carefully applied new tape and then dipped the coils in high temperature varnish. After shot-blasting the various metal parts, I painted everything black, cleaned up the commutator, including scraping out the gaps, and replaced some damaged tape on the solenoid. I pressed in the new bushes (these had been soaking in oil for a few days), cut a new fibre washer for the main connection to the coils and re-soldered the solenoid connections.

The trickiest part was installing the new brushes. You need a little hooked tool for this and, a word of warning, it's easy to get them the wrong way round. Getting the lever arm from the solenoid to engage properly with the bendix requires putting everything back together in just the right sequence.

I had encouragement and guidance from Jeremy throughout. Without this I doubt I would have tackled the job myself.

Allowing the car to get flooded was an expensive and time consuming mistake but on the bright side it caused me to learn a lot and do some very enjoyable jobs that I probably would never have got round to. This year we're safely in winter storage on higher ground!

