

### How can I stop my brake squeal?

Angus Munro posted a query on the V8 Bulletin Board saying "the brakes on my MGBGTV8 squeal badly" and that his internet searches had produced a variety of notes on how to solve the problem but often contradictory. Angus mentioned he was easy on his brakes. He welcomed fellow members' views or information.

**Angus Munro** subsequently mentioned that "when a highly competent chum looked at the problem of the squealing brakes he found that the complete front brake system was new, as it should be as my MGBGTV8 was a completely rebuilt car, but when he tried to chamfer the pads one of them was so hard that it would not be cut. He termed it a "rouge pad". The pads were then changed for a brand new set of Mintex but, the squeal was then even worse - really awful. Brake squeal seems to be a problem for everybody with an MGB or a BV8 if what I read on the internet is correct. As brake squeal didn't happen when the model was first launched - "I had a brand new MGB Roadster in 1966" - the only conclusion I could come to is that the pad compound has changed over the period. This is quite understandably as the original compound contained asbestos apparently". It was clearly very frustrating for Angus who added as there seemed to be "no real conclusions or answers yet but a fifty mile drive to the North Norfolk coast yesterday convinced me that a wonderful car and driving experience is being completely ruined by the brake squeal until I do something and preferably get it right first time. What to do? Desperate in Norfolk".

**Tony Lake** noted "my brake set up is dimpled and grooved discs with EBC Green Stuff pads which squeal occasionally when reversing. I believe my callipers are the original factory design. I am not a heavy braker. I have rebuilt them a couple of times in the last 17 years when fitting new disc rotors and have always managed to salvage the whole assembly and reuse all the parts with a service seal kit. The pistons are relieved for a small sector where they butt against the pad. This is counter intuitive, but it would seem like good practice to apply the hydraulic load through a full 360 degrees. The **squeal is caused by a very high frequency vibration** which I suspect is interrupted by the discontinuous perimeter of the piston. I also recall that piston position in the calliper with respect to the relief is critical, but can't find a reference to it. I wonder if this is the key to the squeal problem, replacement parts book illustrations show pistons with a full 360 degree piston perimeter?" Tony added "I've just found the assembly instruction for the piston. Extract from AUSTIN MORRIS PRODUCT TRAINING, Service School Cowley, part of a publication dated 1972 which notes "the cut-away portion of the piston must be located at the inner edge of the calliper, i.e, towards the hub." In that position the hydraulic load will likely lead to

a "toe-in" attitude as the pad makes first contact with the disc. That method of adjustment is also favoured when setting up bicycle brake callipers to get rid of squeal".

### Good news – squeal solved

Angus Munro later reported that on fitting alternative replacement brake parts the squeal no longer occurred saying "I am now able to report that the **squealing problem has been solved** and that, so far, I have completely quiet front brakes. This has been achieved by fitting new **standard EBC OE spec discs together with EBC Ultimax2 pads**. I purchased the discs and pads as a set directly from BMH at Witney for £146 which was cheaper than buying the discs and pads separately by about £20. I chose the Ultimax2 pads because they are the softest of the EBC range and appear to be free of metal within the pad material. I am hoping that the softer pad material will help to absorb any frequency vibration that may have contributed to the sound, the squeal. BMH kindly included a packet **containing thin sticky back 3M rubber strips** for adhering to the steel backing plate of the pad separating the calliper piston from the pad backing plate. Interaction between the slightly floating pad steel back and the piston may have contributed to the squealing sound. This may go some way to explaining why some people have had success with the use of Copperease between the two surfaces, the Copperease acting as a lubricant of course. By using the 3M strip we did not use any Copperease. Should the rubber eventually wear through it will be a simple job to replace it as the kit supplied was more than sufficient for several application over time.

### Which way is the right way to fit the pads?

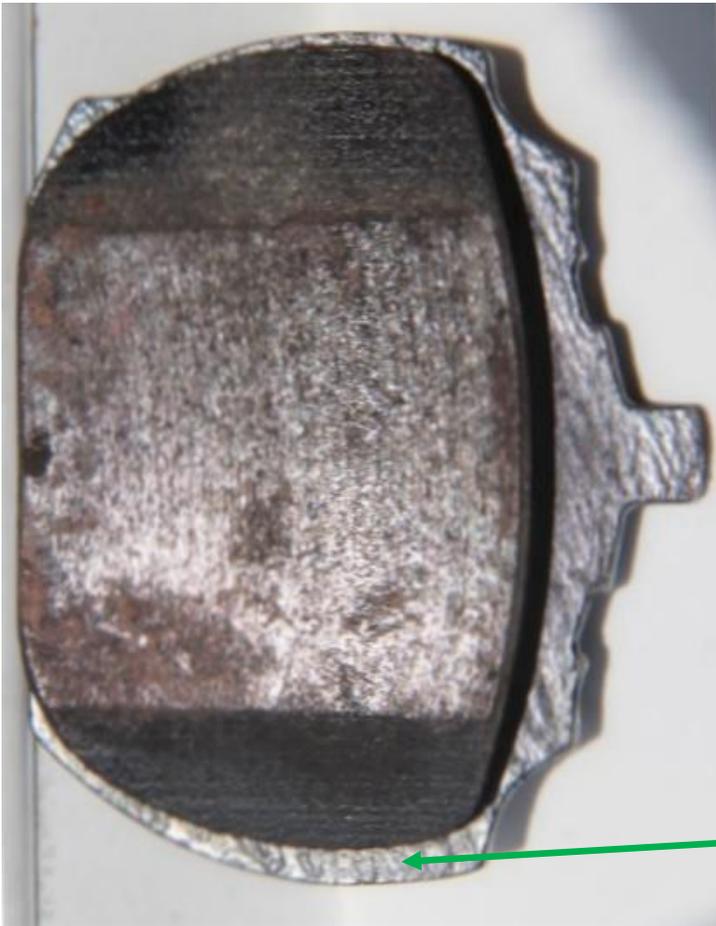
"Comparing the old, less than 200 mile old, pads with the new EBC pads both had the same oddity. The steel backing plates were symmetrical about a horizontal centre line and yet the pad material is displaced with its own centre line, a slot in fact, a little above the backing plate centre line. What this means is that there is a greater lip of backing plate exposed at one end of the pad than at the other. So. . . which way is the right way up? We had to make a telephone call to BMH at Witney to ask the question as, astonishingly, there is no mention of this in the instructions and no marking on the backing plate. The answer is the **longer lip is at the bottom**.

The discs as supplied are coated with a black material which we were advised to leave in place. For the pads, I quote from the packaging, "**The surface of the brake pads for street pad materials is coated with a red material known as BRAKE-IN. This coating helps your brake pads to 'seat' or bed in quickly. However pads should be used gently for the first 100 miles.**" Once the two coatings, disc and pad, have worn away and I return to the real world of bare pad to bare disc, I hope that even my gentle braking style will continue with silent brakes. As mentioned before, if it works for a ten year Golf using aftermarket pads.

I should mention that all four pistons were correctly orientated with the slot facing the centre of the hub".

**Angus Munro** hopes this note will be useful and he thanked the various contributors and followers to the V8BB thread who have been with him along the way. He added "mostly though, many thanks to my super chum John Cumming who actually did the work for me yesterday. He just made it all look so very easy. Should anybody care to discuss any aspects of this work directly I am happy to be contacted by telephone. My contacts are on the [Contacts](#) webpage on the V8 Website".

Below is a photo of one of the old pads that will clarify what Angus meant regarding the pad material/pad backing steel relative positions. This will help fellow members fit the pads in the correct position.



### Avoid over enthusiastic advice that high performance brake pads upgrades are worth having

**Angus Munro** feels that some suppliers recommend using high performance brake pad upgrades with racy product names that are, in reality, completely unsuitable for our general use. He found that installing that type of pad on his MGBGTV8 produced a very bad squeal but finally on using a relatively soft brake pad the squeal vanished.

### Make sure the brake pads are installed the right way up

The extended lip between the pad material and the steel backing plate needs to be located at the bottom of calliper. Angus adds, chamfering on the pad alongside should be ignored as it was an earlier "after market" attempt to cure the squeal problem".

Contacts: <http://www.v8register.net/contacts.htm>

Extended lip between the pad material and the metal pad holder needs to be located at the bottom of calliper

