MGBs With Leftist Tendencies

The long and the short of the story

Last year, when Harry Mac Lean and I were fitting new differential gearing to my MGB-V8 conversion, in order to have the car off the road for as short a time as possible and to save working under the car, I considered doing the job on a different back-axle and then swapping it out for the one in the car. I called Guy St. John to ask if he had an old back-axle I might borrow. He had just one and he was generous enough to offer it to me so long as I was sure I wanted a wire-wheel axle and that he got the same type back. Frankly, I thought that all MGB back-axles built after 1965 were the same, so it was news to me that there were wire-wheel and bolt-on-wheel axles, so Guy kindly and patiently took the time to describe the whys and wherefores of them to me. Coincidently, at about the same time, a copy of *Enjoying MG* arrived in my mail-box which included an article by Roger Parker that covered much of the same ground. What follows is a summary of the information that I learned from Guy and Roger, as well as some additional data I have put together that might help members understand any MGB tire to wheel-arch fouling problems they may have.

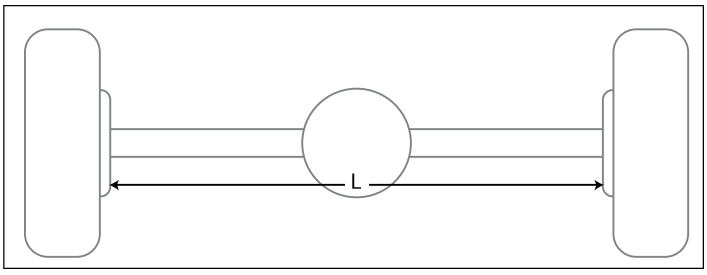
Simply put, whereas rear bolt-on-wheels are situated directly against the brake drum, wire-wheels sit on a conical section on a special hub that makes them further outboard by about $^{7}/_{8}$″ and allows them to flex a little without contacting the brake drum. To accommodate the longer hub and in so-doing keep the distance between the rear wheels (track) the same for both types of wheel, MG made the rear-axle length of wire-wheels cars about 1¾″ shorter than that for bolt-ons. That worked well until owners started changing things, like the type of hub and wheel and/or the tire: perhaps from a skinny cross-ply to a wider and more bulgy radial. Unfortunately, any problems arising are exacerbated by the fact that, for the whole 18-year production of MGBs, the rear-spring shackle attachment points were welded to the body slightly off-center, with the result that the back-axle is generally positioned, not centrally, but up to ½″ to the left.

For the 20-years or so that I've owned my roadster, it's always had wire-wheels, and I'd thought that it came that way from the factory. I had been perplexed that the

175/70-R14 radial tires I'd had fitted resulted in fouling of the left wheel arch as arrowed in the picture and, knowing of the left offset of the axle, I had put it wholly down to that. However, my conversation with Guy sent me running for a tape measure and I was surprised to learn that my wire-wheel car had the wider bolt-on wheel rear axle, and that fact was probably the major contributing factor to the tire damage. According to Roger Parker's article, I could ameliorate, if not completely resolve, this problem by fitting wire-wheel conversion hubs in place of the factory ones. These would apparently bring each wheel in by a little less than ½″, still leaving just a little space for some wheel flex. Come to think of it, fitting one to the left side only may restore my overall axle symmetry!

I then took the tape measure to my GT, which has fat 195/60 -R15 tires on bolt-on alloy wheels. How come those don't foul the wheel arch? The reason is that it has the shorter wire-wheel axle that brings the wheels in closer to the center of the vehicle. It turns out too that, unbeknown to me at the time, because of the left leaning rear-axle, the *right* tire of this car fouls the *inside* of its wheel-arch. As the picture shows, in this case the problem is not nearly as great. The contact point is the attachment bulge for the bump-stop, which can be "adjusted" with a hammer and, moreover, tire contact only occurs when the car is jacked-up with its wheels hanging — or when driving airborne!

So, I learned that my wire-wheel car has a bolt-on axle and that my bolt-on-wheel car has a wire-wheel axle. You



can check yours by running a steel tape measure between the flat areas of the brake back-plates, as shown in the sketch. The exact measurements depend on a plethora of variables and tolerances but for a wire-wheel axle, dimension L should be about 46¼″ and for an axle designed for bolt-on wheels, about 48″.

- By Rick Astley