

Saga of a late Matchless twin air filter By Paul Allen

Trying to complete the restoration of my 1963 Matchless G15/45 750 cc twin, I asked several US suppliers of parts about stock air cleaners. On models other than those intended for off-road use, air cleaners were available as an option, but they were rarely purchased and installed, even in the US. They were made of what we now call unobtainium. Most owners simply ran a bell mouth on their Amal carb, and called it good.

At the request of one of my favorite supply houses in Iowa, I photocopied and faxed the pictures of different Matchless air cleaners that are shown on page 77 of the comprehensive 1957-64 Matchless Workshop Instruction Manual. The supplier used the photos as a guide as he searched through boxes of used parts to find a filter that would work for me. He called back and said he had found a used air cleaner case, without the original mesh fabric air filter element, that looked very much like the one shown for a Matchless single. It had a dog leg bend in the inlet tube. We speculated that it might be easily modified to serve for a twin, which has a straight tube in the photo, so I bought it. I also bought another new old stock part he had obtained for me, part number 026458. In the parts manual that is listed as a mount bracket serving only the 1963 G12 CSR air cleaner. At the time, I had little idea that simple bracket would be so useful.

When the air cleaner case and bracket arrived, seemingly complete, I was quite puzzled by the layout of the parts. Over the next several days, realizations slowly began to gel. They have to come at their own pace, and I try to be patient. The first discovery, shown in photo 1, was a rusty witness mark towards the bottom of the inside cover of the used air cleaner case. This perfectly matched the shape of the NOS mount bracket. Evidently, the air cleaner I had bought was actually part number 026337, intended for the 1963 G12 CSR!



My next dilemma was how to mount the cleaner on my bike. Even though I had one necessary bracket, no other mounts were obvious. Fitting the rusty case against the frame, I noticed that a half inch hole near the top of the inside side plate aligned with the upper battery bracket mount bolt in the seat post frame member. Since that half inch hole was a bit battered around the edges, I concluded that the air cleaner case had simply slipped over a half inch mount stub of some sort. On my lathe, I manufactured a special tall nut with a cylindrical stub for the battery case bolt, and thereby made a suitable top locator for the air cleaner case. Most of the load would be carried by the lower bracket, which gets firmly bolted to the frame.

But how were the inside and outside covers of the air cleaner case held together? The outer cover had some strange holes in it, including another half inch one. But when it was assembled, none of those outer plate holes matched any hole locations on the inside cover for a through bolt or two. It finally dawned on me that except for the very large 1 3/4" air inlet tube hole, the holes in the inside and outside cover were identical, if you think of them both as inside covers. This can be seen in photo

2, taken after the parts were powder-coated. The fact that there were holes in what served as the outer cover merely meant that it had gone through some of the same preliminary manufacturing steps as the inner cover, and could easily have been further finished as an inner cover. When that side plate gets used as an outer cover however, the holes are merely incidental. Still, the question remained- what keeps the covers together?



Fitting the freshly powder coated air cleaner on the bike again, I noticed that the case is a very tight squeeze between the frame downtube and the inside of the oil tank, as shown in photo 3.



So tight in fact, that to get the air cleaner in place, you actually have to loosen the oil tank quite a bit to install the cleaner. With the cleaner installed and the oil tank tightened back in place, there is no way the outer cover of the air cleaner will come off the screen cage of the airbox! So no through bolts on the air cleaner case were used or needed at all! In fact, when I get the engine installed in the frame, I may find I have to remove the oil tank to service the air cleaner. I guess that's better than having to remove the engine to get to the filter, though. Perhaps that's why they used this model filter for only one year on the G12 CSR's.

I cut a length of suitable air filter foam to use in place of the original mesh fabric, oiled it properly, and completed final assembly of the filter. All of the unassembled pieces are shown in photo 4. With the upper and lower frame covers in place between the oil tank and toolbox, as shown in photo 5, you have little idea that there is a very effective, large capacity air cleaner inside. But it's reassuring that my precious rebuilt engine will be breathing clean air.

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