NEWSLETTER

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V8 Register

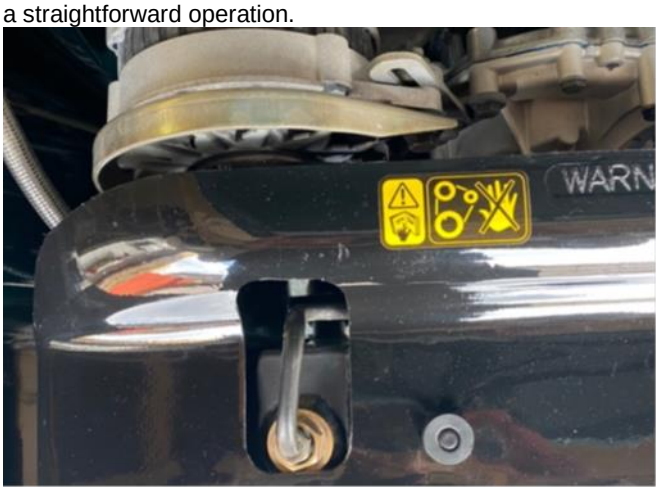
WELCOME TO THE V8 NEWSLETTER

New radiator with cooling fan

RV8 replacement aluminium radiator

Julian Drew explains that he purchased an aluminium Radtec radiator for his RV8 last September because he was a little concerned that the relevant standard replacements available were probably units that had already been refurbished a number of times. Having experienced a couple of poor examples he felt a new fabricated unit was the way to go.

In terms of fitting the Radtec radiator, this was fine. The "out and in" through the bottom as normal, and finding the mountings were all in their correct locations. Sizing was pretty much spot on, although the shape of the side tanks are more square on the uprights, but this does not present any real problem. One point to watch for is the small retaining clip that supports the expansion tank metal pipe coming from the far side of the radiator. As the clip needs to be adjusted to fit the thicker material with the aluminium, but this really is a straightforward operation.



The cover does mask most of the radiator, however, the expansion take off union is visible and would look different with the aluminium radiator not being black powder coated to match the original.

The mountings for the fan assembly were all positioned where they should be which made fitting the fan quite easy. Julian says "I would however take time dismantling the fan brackets from your old radiator and again take the time to clean them up so they are ready for fitting on the new radiator. The radiator cover assembly to the top also fitted well, confirming the suitable position of the radiator lugs etc".

I would suggest you pay the little extra to have the radiator powder coated in black, similar to the original, as I feel the aluminium coloured radiator may look out of place through the grille, especially with the black radiator grilles we have on an RV8. That's unless of course you prefer a rather different look.

The build time from Radtec was a few weeks I seem to remember and the staff members there were quite helpful with any questions I had."

Through the grill, an aluminium radiator that is not powder coated would stand out somewhat as the grill is also black. Similarly from the inside of the engine bay, without powder coating the aluminium radiator would be quite noticeable.

Why did I choose an aluminium radiator?
The main reason I went for an aluminium radiator was to get a new fabricated item. With my previous RV8 I had found the available replacement RV8 radiators were reconditioned units with new cores, but the side tanks seemed not to have gone through the same level of reconditioning. My experience of the radiators I was sent was they had damaged or out of shape hose unions. I ended up sending one back as I was not really happy with it, only to find the second replacement in a similar state.

The **aluminium option** is of course fabricated for you once you place the order so new unions and other parts are an advantage. But the cost is high and you do need to rely on a near exact match. Since buying mine I have heard some buyers of fabricated radiators have had difficult experiences with the aluminium unit not fitting well and having difficulty with the fan mounting. That said I would be very careful to ensure when ordering the aluminium unit that you feel as confident as you can that Radtec or anyone else will be able to provide a suitable unit.

I know also of **another option** and that is using a local radiator specialist. I remember with my previous RV8 I had originally researched having the radiator reconditioned locally, which I understand is essentially what Clive Wheatley mgv8parts and Brown & Gammons do. **Arrow Radiators** in Melksham seemed to be able to offer this facility, which is becoming more difficult these days in terms of finding a suitable repairer. But it is likely there will remain a few specialists that offer this facility in different geographic locations in the UK and overseas.

Radtec advertise the RV8 option, which is what drew me to their radiator in the first place. **Part Code: RMGRV8**, an all alloy radiator designed from an original pattern. Powder coating and fitment is as the original RV8 radiator so no modification is necessary. **£432** including VAT

A matt black powder coated aluminium radiator.

Future V8 Tours

Ken Clayton (V8 Tour Coordinator) reports that there is exciting news: a V8 Member has very kindly stepped forward to run the forthcoming V8 Tour 2022. Further details will be announced on the V8 Website, in due course. Future V8 Tours need volunteers to step forward to plan and arrange them. We now need a volunteer to step forward to run a V8 Tour in 2023 so if you are tentatively interested, Ken would encourage you to contact him to discuss how you can help to run that tour. His contacts are on our “More” webpage at: https://www.v8register.net/more.htm

V8 AGM at MGlive!

The V8 AGM 2022 will be held on Sunday 12th June 2022 at noon in the V8 Marquee at MGLive! at Silverstone. The formal notice will appear in Safety Fast! and a copy can be seen on the V8 Website. Nominations from new volunteers are welcome to take up tasks and roles as members of the V8 Committee team. Already four members have done so: Keith Belcher (Pricewatch team), Peter Berry (V8 Scribe), Peter Ellis (workshop notes editor) and Dugald MacNeill (V8 Registrar). Victor Smith has to stand down as V8 Chairman at the V8 AGM as it will be the end of his term. See the formal notice and more information on the meeting and nominations on our “More” webpage.

Replacing a faulty bullet connector on an MGBGTV8

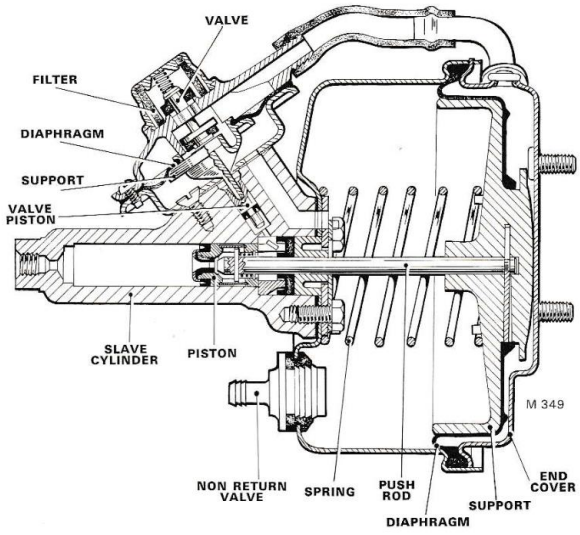
Jim Livingstone feels this note may seem trivial but the circumstances at the time the problem occurred (on the eve of his departure for a visit to Australia) made the failure of this simple bullet connection quite dramatic. The observed symptom was a failure to restart after a short stop. The cause was not immediately obvious and as the light was fading the breakdown service was summoned. It took all the detective skills of the RAC technician to eventually trace the source to an open circuit in the connection between the main harness and the rear harness just forward of the brake and clutch master cylinders (red ringed above). Jim reveals more.

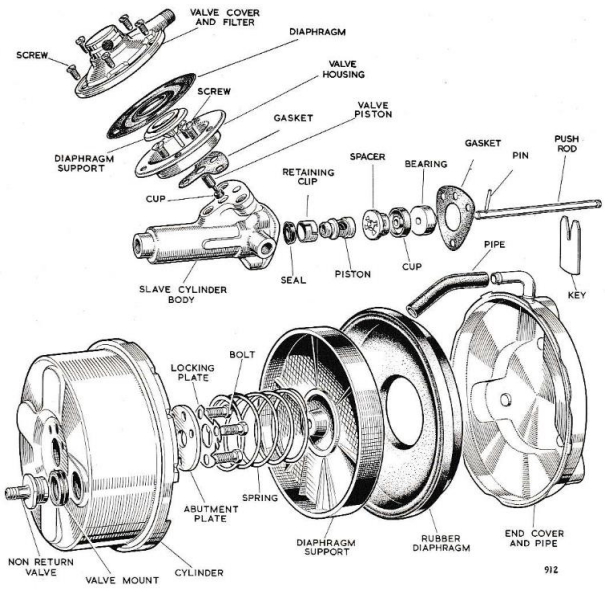
There was evidence of burning on the connection and adjacent harness which indicated the the cause was overheating due to high electrical resistance in the bullet connector. As modern breakdown services do not carry obsolete connectors, the wires were reconnected by soldering and the journey resumed, albeit five hours behind schedule.

That Jim’s experience was not an isolated incident is supported by **V8NOTE384 – Common Wiring Faults** in which the contributor Barrie Jones observes "there is a 4-way bullet connector on the bulkhead where the main wiring loom is connected to the rear loom. It has 3 white wires going into it. The internals often corrode and then overheat."

The MGB and derivatives were designed during an era in which the 4.7mm bullet connector was the default connection between sections of wiring harness in British vehicles while connections to fixed components were made by 6.3mm blade (spade) terminals or eyelets.

Maintenance of connectors should include regular inspection of the connector for corrosion and to ensure prompt replacement if any is evident. Separation of corroded components can overstrain the cables, and this makes a strong case for incorporating strain relief in the terminals. A light coating of grease or wax to exclude moisture is recommended on reassembly of the connection. An insertion tool for the bullet and connector can be used but is not essential. Our “More” webpage has a link to the full article.





Cross section & parts diagram of the Lockheed brake servo

Maintaining the brakes and servo on an MGBGTV8

Recently Keith Belcher found a copy of the Lockheed brakes manual he had received in 1974 from the Parts & Service Division at Automotive Products Group (AP) in Banbury, with the handwritten note on the cover sheet noting it “also covers MGB, MGBGT & MGBGTV8 1973 onwards”. He was unsure whether a Lockheed type 6 or 7 vacuum servo was fitted to an MGBGTV8 but our parts guru Peter Beadle clarified "that according to the Factory MGB Workshop Manual AKD3259, the servo is a **BHA 5076** single line remote **Type 6 servo** fitted to chrome bumper MGBs and early rubber bumper MGBs and all MGBGT V8s”.

The Lockheed brakes manual from AP covers twelve maintenance areas for brake and clutch hydraulics: a useful servicing summary and trouble diagnosis, disc brakes with pad renewal, caliper piston seals, rear drum brakes, vacuum servo unit and an overhaul procedure, brake and clutch master cylinders, clutch slave cylinder, pressure regulating valves, vacuum non return valve, bleeding and flushing and flexible brake hoses.

Fortunately **brake failures from servo problems** are rare but, unlike difficulties with slave cylinders where early warning signs can usually be detected, early warning signs of potential servo failure are few. A number of rapid brake servo failures on MGBGTV8s have been reported by V8 members over the years but fortunately they occurred when the V8s were travelling at low speeds and without damage to the car or personal injury. If you have had the experience, thoughts of the consequences of a sudden servo failure and a complete loss of brakes at even low speeds are spine chilling!

A cautionary V8 Workshop Note on brake servo failures was released in June 2001 following three servo failures reported by Victor Smith, Jim Gibson and Peter Berry. Those three cases were covered by V8NOTE228 but subsequently we have had a further 12 reports of a brake servo failure. Roger Parker also provided very useful views on the causes, noting "the very big issue here is not the failure, which is something to expect over longer periods, but still a serious shock when it occurs.

Replacement servos are available from the specialist parts suppliers. The brake servo for the MGBGTV8 is shown on the Brown & Gammons website as: Brake Servo (3 Stud) O.E. MGB & V8 AP Unit, Product Code: GSM125OE. Links to the B&G webpage, a copy of the AP Lockheed brakes manual and to a copy of the cautionary note are available via links on our “More” webpage.

Brake servo failure

With the introduction of the MGBGTV8 in 1973, the luxury of servo braking arrived providing reliable and powerful braking for the high performance MGB model. As the V8 model approaches its 50th year, a number of the components are clearly ageing and preventative maintenance needs to be considered. The V8 has a hydraulic braking system that comprises a remote or indirect servo on a single circuit braking system, so a serious servo brake fluid leak or a failure on the single brake circuit can lead to a complete loss of brakes. Consequently there is a real need to maintain the brake hoses, the brake master cylinder seals, the brake slave cylinder seals and the flexible brake hoses, not to mention the servo itself. You can see illustrated diagrams describing how the Lockheed servo works on the MGBGTV8 and how they can fail on the “More” webpage.

Over the years we have seen reports from members of over ten servo failures and three cases are worth reviewing:

Cracked servo vacuum piston

On stripping down a servo on Victor Smith’s V8 following a very rapid loss of brakes from a servo failure, fortunately at 25 mph which the handbrake could control, the cause was found to be a cracked vacuum piston. On inspecting the servo the late Geoff Allen felt the component on that servo may well have been cracked from its manufacture, but it was the only one he had ever seen in that condition in over 30 years of working on MGBs in Rectifications Department at the MG Plant and later running his own MG servicing business in Abingdon. Usually with faulty servos he had found the plastic seal on the piston was leaking.

Seal failure in the servo

Jim Gibson experienced a sudden servo failure when he was reversing out of his garage. He was able to grab his handbrake when the foot pedal went straight to the floor – fortunately the beech tree behind the car survived unscathed! Jim commented "when my heart rate returned to normal, I realised that the more than usual quantity of "steam" from the exhaust on starting up should have told me something was not quite right - it was of course the brake fluid from the servo going straight past the seal and through to the inlet manifold and then burnt in the engine."

Hydraulic fluid leaks around air valve piston

Peter Berry also reported a brake servo failure due to hydraulic fluid leaking around a tiny air valve piston. This

occurred slowly over a period of time - more frequent checks of fluid levels have been performed ever since! What was happening was that leak was quietly depositing the contents of the master cylinder into the servo shell. When the level of the fluid reached a point where air entered the system, the results were obvious. In this instance repeated pumping of the pedal produced sufficient pressure to stop the car and no damage was done. On removal of the servo, the contents of the master cylinder were drained from the shell. No fluid actually left the car, it was simply redistributed.

Ron Gammons mentioned that it's worth running the engine to energise the servo when bleeding the brakes.

Servo seal leakage – need for routine maintenance

Roger Parker comments that "seal failure in the servo is about as probable as leakage from a master cylinder. Over time there is a more than reasonable likelihood that the seals will fail and result in a sudden failure, unless you happen to be the Lottery winning type who just happens to check the brake hydraulic fluid level when only half the reservoir has emptied as the seal begins to go! With a weak seal between the end of the servo piston chamber and the hydraulic fluid system, there is a natural draw on the fluid from the vacuum created by the engine. With a failure it would follow that you could see a complete drain of the brake fluid reservoir very quickly!

Roger noted the very big issue here is not the failure, which is something to expect over longer periods (but still a serious shock when it occurs), but two specific points. Firstly the service schedule states that all brake hoses and seals should be replaced routinely every 36,000 miles or 36 months. This routine recognises that these parts degrade and so the replacement is a point that has to be stressed as an essential safety service item. The other point to mention is that with a servo seal failure you do not get the same warning of an impending problem as you do with a master or wheel cylinder failing – typically the tell-tale wetness that you get running down the pedal or the dampness on the drum inside the tyre. Often you also get an indication of a problem through a reduction in or a clear change in brake efficiency.

Usually it is the end seal that attaches to the piston inside the servo that leaks. The leakage is much the same as that with the end seal of the master cylinder. However unlike the master cylinder, where fluid leaks visibly, the fluid is contained within the servo reservoir body and ultimately is drawn into the inlet manifold and is burnt in the engine. Although there is an increase in visible "smoke" from the exhaust, this is usually so small a difference from the normal water vapour cloud from a cold engine. Most people will not notice the slightly increased "smoke" in the exhaust from the fluid leaks.

So with no visible clues of a fluid leak, the sudden onset of the consequences of a servo failure is obvious and understandable. Hence the importance of an emphasis on the need and value of brake hydraulic inspections and maintenance at the recommended service intervals. So whatever you do, don't scrimp on brake and servo maintenance. A replacement servo costs around £250 or alternatively you can have a good unit refurbished with new seals. A small price to pay for reliable brakes!

AP Lockheed brakes manual

A copy of the AP Lockheed brakes manual will be added to the "manuals" folder we include in sets of V8NOTES and also a copy will available on the new online V8 Shop as a free offer for members of the V8 Register. See the "More" webpage at: https://www.v8register.net/more.htm

Frontline's bespoke MGV8s are coming

News from Connor Matthews at Frontline Developments near Abingdon that they have a limited run of bespoke MGBGTV8s coming in May. They are producing 30 MGB GT V8s to celebrate 30 years of Frontline and 60 years of the MGB. Their MGBGTV8s will be powered by a 4.1 litre Rover/Buick V8 which will have a roller rocker camshaft, vastly upgraded internals and a bespoke, billet alloy fuel injection system. The car will be the highest specification of vehicle Frontline have ever built and will reliably produce 400hp. The cars will be available in both LHD and RHD. Frontline say "our demonstrator is currently in the bodyshop and should be alive and available for test drives and journalist reviews in May".

MG-40 Celebration event

The Club's Registers covering the MG models launched in the 40 post-Abingdon years are supporting this two day MG 40 Celebration event which will be located on a site adjacent to Toddington station which is on the Gloucestershire to Warwickshire steam railway line running to the north east of Cheltenham. Three MGV8s were launched after Abingdon closed, not least the RV8 which will see the 30th anniversary of its launch in 1992 with the main production underway in 1993. The limited production MG ZT260 saloon and then the MG SV sports car came a little later. This promises to be a great weekend with plenty on offer for the modern MG owner. The organisers say "that due to the restrictions on car parking the site can take 250 vehicles per day - please select either Saturday or Sunday, regretfully we will not be able to swap days". Tickets can be booked online – see our "More" page for the link.

Replacement RV8 rear lamps are coming

Many RV8 owners have endured the frustration of having a broken rear lamp and being unable to get a replacement have in some cases not been able to get an MOT pass and take their car out on public roads. The good news is RV8 enthusiast Jim Greenhill and RV8 spares specialist Clive Wheatley are making good progress in getting a new supply of RV8 rear lamps made using modern 3D printing technology. The first batch of the new units will be available soon and details of how to get one will be released promptly on the V8 website and on the V8 Bulletin Board. Priority will be given to V8 Members with a damaged RV8 rear lamp unit which has caused an MOT failure. With this welcome news it should enable them to repair their car and then remove the frustration of their not being able to enjoy driving their RV8 on the roads. The renewed availability of this essential spares item will also be will welcome as it will avoid further opportunist online offers from speculators like the one seen on eBay in recent months with an RV8 rear lamp unit priced at an eye-watering £1,500!