NEWSLETTER

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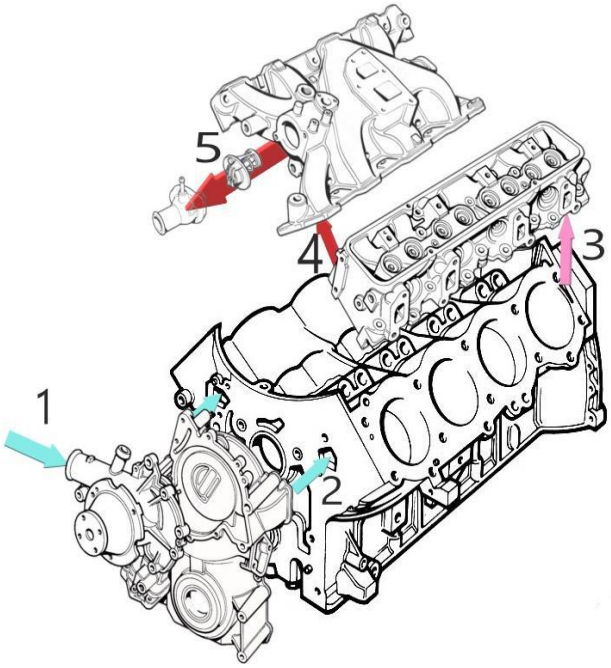
V8 Register

WELCOME TO THE V8 NEWSLETTER



Key to coolant flow
1. Coolant from Radiator to the Water Pump Inlet (cooled water)
2. Flow from Pump Outlet (in Front Cover) to the Cylinder Block (both banks)
3. Flow from rear of Cylinder Block to the Cylinder Head (both banks)
4. Flow from front of Cylinder Head to the Inlet Manifold (both banks)
5. Flow from Inlet Manifold to the Radiator via Thermostat and Outlet Elbow
Note that the coolant flow is from front to rear in the Cylinder Block and from rear to front in the Cylinder Head.

Why did the temperature gauge go near the red and lead to a breakdown recovery!

Victor Smith describes how his MGBGTV8 had an overheating problem which resulted in a breakdown recovery. An investigation revealed a coolant leak and on discussing the tale with Tony Lake later he commented that if the leak was even modest then the cooling system was being asked to deal with the same heat rejection but with a lower volume of coolant. Then the operating temperature increases which is what the gauge confirmed. He added "once coolant loss occurs then it is unlikely that the system pressure becomes high enough to help increase the boiling point of the coolant; so the loss through boiling only makes the temperature higher. But the fact that you still have coolant to boil protects the vital parts in the cylinder".

What happened on the day of the breakdown?
It was a hot day and as I was negotiating the streets in Richmond to get on to the main A316 which goes out to the M3. I had my cooling fans' override switch on to ensure the radiator was being cooled as early as possible but I spotted my temperature gauge was moving up passing the 4 o'clock position, then 3 o'clock on the dial and then it approached the red zone just before I was able to pull off into a side road and cut the engine. I then turned the ignition on so with the override switch still on the cooling fans could run.

After about five minutes I briefly fired up the engine. Normally with the coolant slightly cooled with the fans running, the needle on the gauge would fall back but it remained very close to the red zone. I checked the top and bottom hoses - the top was very hot and the bottom less so. I felt the coolant might not be circulating.

When the AA arrived he saw it was an MGV8 and mentioned he was a classic car enthusiast with a Triumph Stag and said he thought the likely cause was a seized thermostat in the closed position rather than a failed water pump. He recovered the car to my home and then I made arrangements for the car to be taken to Baldock by Brown & Gammons on the back of a truck for an investigation and repair.

What was the cause of the problem?
A week later I went up to Baldock to collect the car and heard that they had found coolant had been leaking into the "Vee" under the inlet manifold. Searching for the cause of the leak they found the **Heater Feed Pipe** 90611532 between the water pump and heater, which is an internal pipe that is screwed into the intake manifold, was in good condition and was not leaking and causing the problem. The original pipe

Heater Feed Pipe 90611532 – water pump to heater with a swaging near the end for the hose to grip to, is an internal pipe that is screwed into the intake manifold.

can corrode quite badly but mine was a replacement composite stainless steel pipe with a "copper like" look to it and was in good condition.

The **Bypass Pipe Heater Outlet** 603049 attached to the underside of the intake manifold was also in good condition.

Stainless steel replacement **Bypass Pipe Heater Outlet** 603049 attached to the underside of the intake manifold (Ralph Hardwick)

They then found the **Gasket for the Inlet Manifold** GEG665 was the source of the coolant leak, so the manifold had to be removed. Steel bolts in aluminium can be a devil to extract and in this case one of the bolts sheared and had to be drilled out and replaced. The manifold was then put back with a new gasket and a precautionary coating of thread sealant on the bolts to help protect them from the galvanic or bimetallic corrosion effects with steel in aluminium that often lead later to a difficult experience extracting them.

The thermostat housing was removed relatively easily and it was found the thermostat had not seized but as a precaution a new replacement **thermostat** GTS104 and a new **Otter switch** BHA5252 were fitted, plus new gaskets of course. During the work they also found the sump was leaking very slightly so the sump was removed and put back with a new gasket. The replacement coolant was SilverHook blue summer coolant and antifreeze AFB5 which is an ethylene glycol based product. The capacity of the V8 cooling system with the heater is 9.08 litres.

Return home from Baldock

The return trip home via the A1 and M25 went well but at 70mph the needle on the temperature gauge moved just right of the 6 o'clock position to near 5 o'clock so I eased back to a steady 60mph and then using my manual override switch set the cooling fans running whereupon the gauge returned to 6 o'clock. It was a fairly warm afternoon in August. So I felt the problem had been cured but I later checked the coolant level in the expansion tank and removed the brass radiator plug to check the radiator coolant level there too.

How can you spot a problem like this as it is developing and avoid a breakdown?

Upon reflection I did notice on the morning I took the MG out of the garage that the carpet tiles under the sump area were slightly soiled with a little oil marking. The B&G service manager felt that a little of the leaked coolant must have run down the side of the engine and over the side of the sump and on to the mat. So those were early signs to remember as a future early warning. On studying the carpet tile later the soiling was noticeably less than you would get with an oil leak from the sump nut or from the sump gasket. Spotting a coolant leak accumulating in the Vee under the inlet manifold is difficult to see.

Regular checking of the expansion tank (coolant level should be around a third full) and removing the brass plug on top of the radiator to check it is full are well worth doing. Also replacing an ageing coolant **Pressure Cap GRC110** on the expansion tank is a modest cost to ensure the pressure holding capability of the cap does not fall with age and compromise the cooling system.

Check the condition of your radiator

Another issue with an effect on cooling is the external condition of the radiator. Tony Lake says “you would be amazed at how much rubbish accumulates at the front of the radiator - dead insects, residue of leaves, general road dirt and any amount of rubbish, all of which doesn't help cooling. A high pressure jet flush from the back of the radiator will dislodge the bulk of it. Also an occasional flush of the radiator to remove sediment that has accumulated over time”.

Another overheating case

Ralph Hardwick mentioned his experience: “I have been through this process and know it too well. I purchased my Factory MGBGTV8 in November 2019 and, as it had only covered around 1,000 miles in the previous 10 years, I decided to trailer it from Heswall to Brown & Gammons at Baldock for a full fluid change.

On my way home down the A1 and on the M25 and M11 to London there were three occasions when the temperature gauge needle swung towards 4 o’clock and ejected coolant through the expansion tank. I managed to limp home after replenishing the lost coolant and using the fan override switch. I decided to replace as much of the cooling system as I could - radiator, hoses, water pump and thermostat.

We then entered Covid lockdown so I decided to venture further. I removed the intake manifold and removed the internal cooling pipe (see photo) which was severely corroded. A replacement was sourced from Rimmers. In the process I had the pair of trousers and intake manifold powder coated in black and grey as it had left the Factory. I cleaned up the 'Otter' switch and cleared the steam pipe. The **Heater Feed Pipe** 90611532, (see image on the previous page) is screwed into the inlet manifold, should not be confused with the **Bypass Pipe** 603049 that runs under the manifold and is attached to it by two screws.

Severely corroded internal **Heater Feed Pipe** 90611532. (Ralph Hardwick)

Still in lockdown I decided that I would remove the cylinder heads to ensure that the passageways were clear. A decision was made to fit some later cylinder heads that I had bought secondhand and I had them refurbished at Powers Performance. When I had removed the heads I discovered that one of the liners was slightly lower than the block deck height - a slipped liner.

The clean piston crowns also indicate that they had been steam cleaned! I removed the engine and gearbox and had Powers Performance fit new 'top hat' liners and rebuild the engine with new HC pistons sourced from Turner Engineering. During the time when the engine was being rebuilt I replaced the heater matrix, replaced the heater valve and also fitted a new replacement stainless bridging pipe from the intake manifold.

Removing the heads discovered that one of the liners was slightly lower than the block deck height - a slipped liner (Ralph Hardwick)

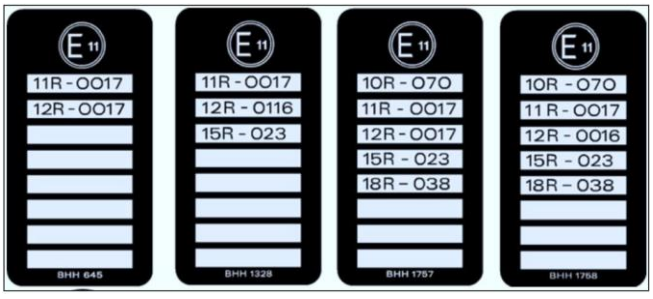
Another overheating case

Peter Berry described an overheating experience he had with his MGBGTV8 in April 2014 on his way from Bromley in Kent to an MG meeting at Brooklands near Weybridge. He said "being a cold morning (2C in Bromley at 8am) I turned up the heater and set off towards the M25. About six miles into the journey I noticed the temperature gauge was dangerously high, with the needle at around the 4 o'clock position. I pulled over, lifted the bonnet and found nothing amiss. A stretch of dual carriageway lay ahead so I figured that if the needle dropped on that part of the journey it would be fine to turn onto the M25, where the temperature would surely drop. Luckily the temperature did reduce so I joined the M25, where the needle came to rest at a more normal seven o'clock position. However as soon as I left the motorway again the needle began to climb quickly once more. I made it to my destination at Brooklands without further drama and switched the engine off immediately.

I thought about what had happened over a coffee and came to the conclusion that my journey that day had one big difference. At the outset, I turned the heater on. As I rarely drive the car in cold weather these days, usually the heater valve remains closed for the vast majority of time. When the engine was out recently the coolant was obviously replaced. The heater valve stayed closed throughout and hence the heater was not refilled when the coolant was replaced. Opening the valve simply drained the coolant from the engine into the heater matrix!

When the temperature settled, I removed the radiator plug and found room for an additional three litres of water in the radiator! Needless to say, the remainder of the day's driving saw the needle at 7 o'clock with very little fluctuation. Relief the problem was solved and a comfortable journey home".

Footnote: the Key to Coolant Flow diagram and explanation was contributed by Jim Livingstone.



E11 Type Approval Label

It was a long and painstaking process, but Rob Rose finally succeeded in tracking down all the variants of the E11 Type Approval Label. For MGB enthusiasts who want to maintain the originality of their car replacement labels are now available from Rob.

MG fixed an E11 Type Approval Label to the offside of the bonnet slam panel of all cars to show compliance with what were then new regulations when the UK joined the EU on the 1st January 1973. The original labels were paper based, not at all durable and were soon lost from many cars. The position of the label on the slam panel seems to vary a little - one original example shows the label to be at the extreme offside, whilst one on a rubber bumper MGBGTV8 example had it a little nearer centre of the slam panel.

Although each label variant had a British Leyland part number, none of them is listed in the MGB parts catalogue. The E11 was only applied at the time of manufacture, obviating the need for spares. E11 signified the UK as country code 11. The codes in the body of the label confirmed compliance of various components such as seatbelts and lighting. The labels were used until approximately 1977 when the format was changed.

To ensure he could source high quality and accurate replicas of the E11 labels, Rob spent a considerable time scouring all possible sources. Most images were grainy or fuzzy and not adequate for the job. First, he found the GT and Jubilee labels and then those for the chrome and rubber bumper MGBGTV8s were provided by David Knowles, Peter Beadle and Malcolm Beer. The part numbers for the labels for each vehicle are:

BHH 645 - chrome bumper 1973 MGB
BHH 1328 - chrome bumper MGBGTV8
BHH 1757 - 1975 MGBGT Jubilee SE
BHH 1758 - rubber bumper MGBGTV8

For durability the replicas have been produced in 60-micron Polymeric Vinyl with a semi matt finish. They are sold in pairs (to provide one as a spare) and are available at £9.95 inclusive of postage and packing. For orders or enquiries and payment options, contact Rob Rose by email at spritemanfiveroses@gmail.com

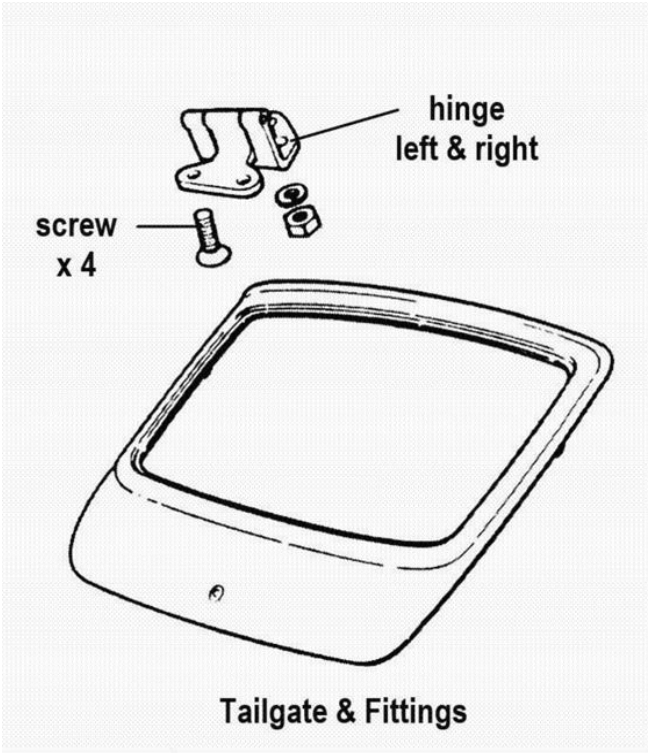
Future V8 Tours

Future V8 Tours need volunteers to step forward to plan and arrange them and so far Ken Clayton (V8 Tours Coordinator) has had no V8 member step forward to offer to run a V8 Tour in 2022. He adds that "without an offer I am afraid there will be no V8 Tour in 2022 so please do contact me if you wish to discuss what is involved". Ken's contacts are available on our "More" webpage at:
https://www.v8register.net/more.htm

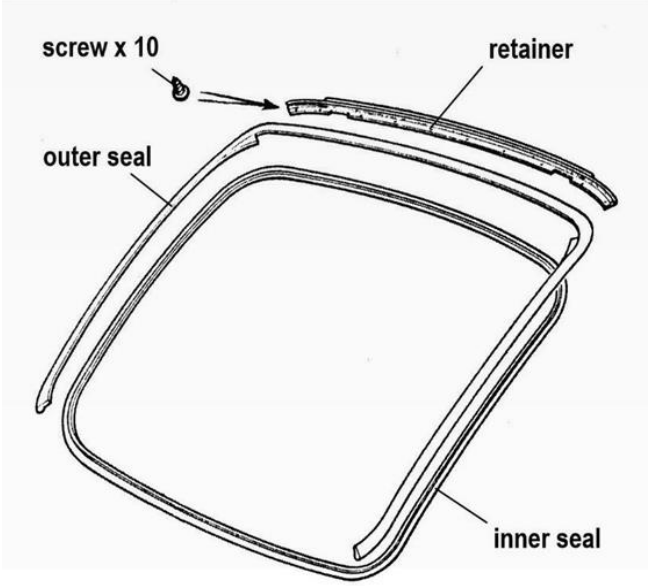
Buying an "Exceptional" condition MGV8?

When MGV8s appear for sale as "Exceptional" examples, often with less than 10,000 to 15,000 miles, a check of the MOT history on the GOV.UK website can reveal the mileages at each test. That can show whether the car has had long lay-up periods. If a buyer wants to enjoy using a car, even for 3,000 miles a year, these "Exceptional" examples will usually need substantial recommissioning work including checks on not least safety issues like the brake hydraulics and seals and replacing ageing tyres.

With even modest use over the next 5 to 10 years the accumulated mileage will build and the premium for the exceptional low mileage car will fall. The combination of substantial recommissioning works and the depreciation in value as the mileage builds and the car moves towards Condition 1 can be a substantial cost for the owner. Unless an Exceptional car is bought as a "trophy" to be kept locked away in a protective carcoon or in museum conditions, in many ways a good Condition 1 MGV8 which has had moderate annual use and regular maintenance provides better value for money for the real enthusiast.



Tailgate & Fittings



Tailgate Seals

MGBGT – tailgate removal and fitting a new outer seal

When V8 owner Jim Livingstone (Glacier White 1810) was caught in a sudden downpour it soon became apparent that his tailgate was leaking. Investigation failed to reveal a serious problem in either the inner or outer seal and as the car's use is restricted to dry weather, so further action was deferred. However the visible surface of the outer seal had looked perished since the car's purchase and a new one was obtained in preparation for its ultimate replacement. This is a summarized version of a detailed article contributed by Jim Livingstone and released as V8NOTE631. See the full three page article on our "More" webpage at: https://www.v8register.net/more.htm

The tailgate outer seal is retained by an aluminium extrusion which in turn is secured by 10 self-tapping screws. Unfortunately these screws are inaccessible with the tailgate in position. Tailgate removal is not a job to be undertaken lightly as it is both awkwardly shaped and relatively heavy. Ideally its removal requires three people, two to support it while a third contortionist removes the four hinge screws. Lacking such assistance the writer's first task was to devise a method of supporting the tailgate while he played the contortionist.

Several schemes were considered to support the tailgate while the hinge screws were removed. The basic requirement is height adjustment combined with a stable non damaging means of support for the tailgate. The problem was resolved by employing the folding properties of a Workmate together with a hydraulic bottle jack to provide the height adjustment. In the event this proved satisfactory provided the jack was positioned under the heavier (glass) end of the Workmate platform.

In essence, the procedure involves adjusting the height of the supporting platform (Workmate and jack) to support the tailgate in a horizontal position followed by removing the tailgate stays and hinge screws. The tailgate can then be slid back to expose the seal retainer and securing screws. The new seal is fitted and the screws replaced while the corners and side extensions are glued in place. The hinge screws are then replaced and the tailgate stays refitted. The closing effort may be increased until the seal has settled but provided that the tailgate adjustment has not been altered sealing should be satisfactory. Adjustment of the tailgate is a rather involved procedure which requires a separate article to address.

Details of the tailgate sealing arrangement

The sectioned MGBGT on display at BMH Museum at Gaydon reveals details of the tailgate sealing arrangement which are helpful in understanding how it works. Note that the original inner seal was of foam construction like the outer seal. Commercially available replacements are hollow extrusions which explains the differences in performance characteristics.