Fitting a Moss headlamp relays kit

With MGBs and derivatives like the MGBGTV8 now approaching the 50 year milestone, modifications that help preserve electrical components such as switches are well worth considering as they are not difficult to install or costly. This useful upgrade uses relays to take the load and potential damage off the ageing switches. Here we have a step by step guide from Andy Goves describing how he had a ready wired twin relays kit (see above and below) supplied by Moss Europe fitted to his 1973 MGBGTV8.

Why bother at all?

The question arises as I have spent approaching 16 years of ownership having my Factory MGBGTV8 returned to its original specification and appearance - as she would have left Abingdon, built as one of this model's launch on 15th August 1973. However, originality has to be balanced against reliability in today's motoring conditions and sensible upgrades which improve safety and reliability must be seriously considered. I have followed with interest the debate and technical advice on the V8 Register concerning the reduced visibility of classic cars by drivers of modern vehicles and HGVs in today's traffic; increased use of headlamps as a safety feature; ageing of switches approaching 50 years old and headlamp upgrade options with the thought that several of these risks could be mitigated by installing this Moss headlamp relays kit. My car had been fitted with Halogen headlamps five years ago but, until reading the very helpful V8 Register notes, I had been unaware of these resulting advantages in using headlamp relays:

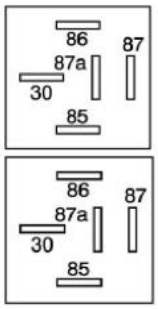
- reduction in current level.
- reduction in voltage drop.
- increased brightness of headlamps.
- reduction in switch temperature.
- extension of the life of the lighting switchgear.

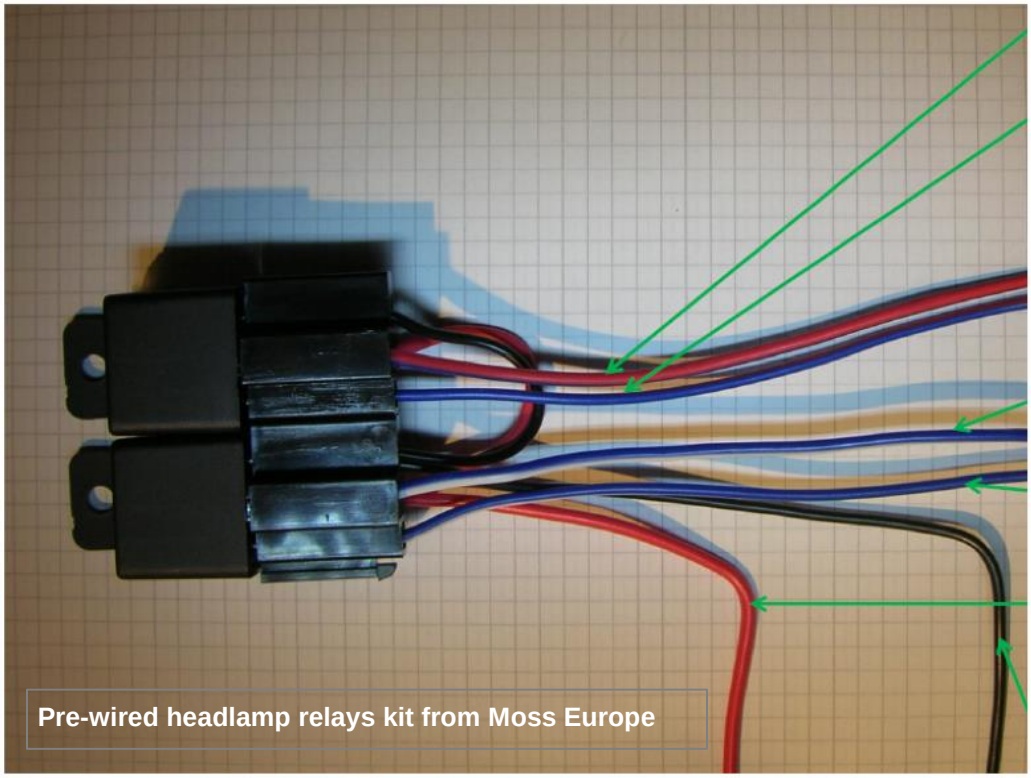
Balanced against my passion for "originality", the twin relays upgrade was an obvious enhancement - provided the more modern relays could be successfully hidden!

How best to have the relays kit installed

The photo alongside identifies each wire in the pre-wired kit from Moss Europe. It is essential the relays with their wiring are connected well, particularly the fused power supply. After 50 years of motoring, I consider myself a competent amateur mechanic, but also know when to consult an expert! I entrusted this work to my specialist restorer who had carried out excellent restoration and servicing work on my MGBGTV8 since 2010: Chris Smith, owner of CCS Restorations based in Chilcompton in Somerset.
https://www.ccsrestorations.co.uk/

Layout of relay terminals





Pre-wired headlamp relays kit from Moss Europe

Installation of the pre-wired twin relays kit
Chris Smith had provisionally allocated four hours for this work (knowing my commitment to originality), anticipating the difficulty would be locating the modern looking relays out of sight. In fact it only took Chris one hour to complete the whole installation!

The approach adopted considered these criteria:

- Preserve the original appearance of the engine bay and electrics.
- Accept the need to lengthen wiring, if necessary, to achieve this objective.
- Achieve proximity of new relays to existing headlamp wiring harness.
- Siting of new relays needs to avoid water ingress.
- Relays will operate in a horizontal or vertical position.

A **suitable location was found** (see photo alongside) adjacent to the headlamp wiring harness that allowed both relays to be fixed horizontally to the metal structure under the dashboard, near to the windscreen wiper motor, providing a good earth connection. This is very convenient for the bullet connectors for the headlamps wiring; in addition the original equipment switch plug could be unpicked to remove the pins and avoid cutting any wiring.

The Moss Europe unit is extremely well produced and offered an opportunity to continue to use the bullet connectors thus maintaining originality. However, I opted for soldered joints to give a higher degree of reliability, noting that there would be no stress or movement imposed on this new wiring.

The red main 12v feed (item 30 in the annotated photo on page 1) already contains an online fuse and is routed through the main wiring loom **rubber grommet in the bulkhead** into the engine bay and onto the fuse box, taking care not to damage the grommet as it can become brittle with age - (see photo alongside). An adequate length of wire was provided with the kit, with no extension required.

Before doing so, a **black insulating sleeve was placed over the entire red wire and then heat shrunk to fit** - the new wire now looked part of the original wiring loom, being secured below the existing black insulated wiring loom in the engine bay (see photo above right). Although done for purely aesthetic purposes, this sleeve provides additional protection against any abrasion which might, in extreme cases, result in a short circuit, acknowledging that the in line 20 amp fuse should provide primary protection here.

Wiring options for the relays
There were two options in wiring these relays - first the headlights being switched on via the ignition only, or second having them live at all times. The sidelights operate irrespective of the option

chosen. I chose the ignition switched option as a further safety related item. Hazard warning lights suffice for any breakdown occurrence; new twin six volt batteries have just been fitted after replacing the eight year old batteries - I had no wish to cause undue drain on these new batteries!

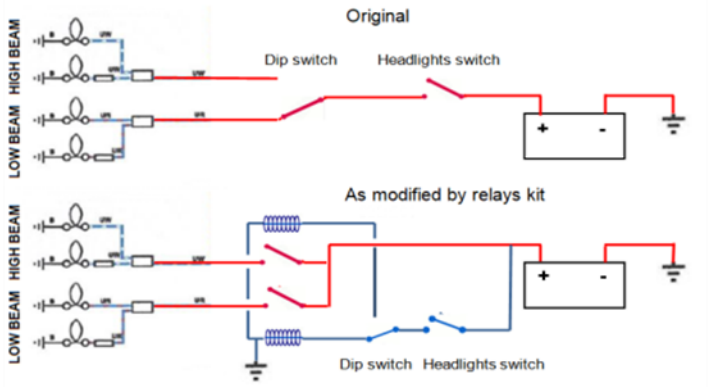
Noting the excellent wiring diagram supplied by Moss Europe and the protection of an in line fuse, nevertheless we decided to take the positive feed from the existing fuse box, again the photo (lower right on page 2) depicts this.

Pre-wired headlamp relays kit from Moss Europe

The Moss Europe kit is extremely neat, well priced and comes with clear instructions. A copy of the instructions is available at: https://www.v8register.net/DD/200319-Moss-twin-relays-kit-instructions.pdf

I am very pleased with the result as the engine bay retains its original appearance yet enhancements have been achieved with benefits in safety and operational efficiency. The twin relays kit is currently available at £36 including VAT.
See the Moss Europe webpage

Wiring diagram for the headlamps relays upgrade



Credit: diagram provided by Chris Hunt Cooke
See our article on how the twin relays work