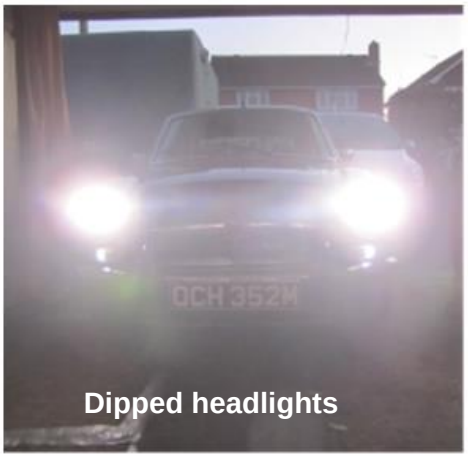

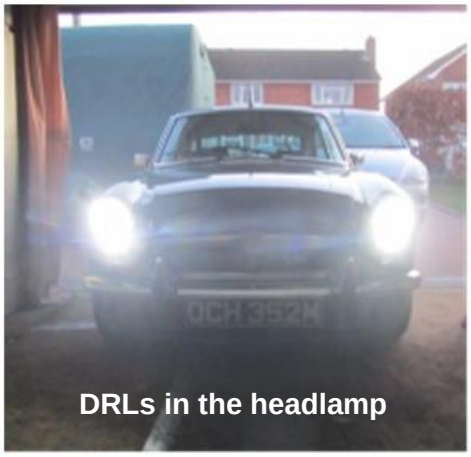

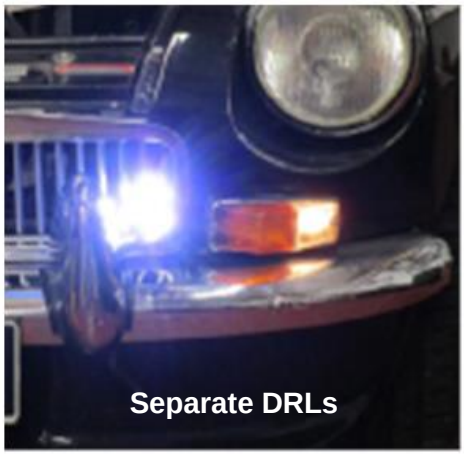

Daytime lighting options for classic cars

Classic car enthusiasts are increasingly aware that with the growth of bright Daytime Running Lights (DRLs) on modern cars which have become much larger, not least from the growth in new SUVs and 4x4s, so the **relative visibility** of a car like an MGBGTV8 is becoming a real concern. Mike Howlett has an MGBGTV8 Conversion which he uses frequently throughout the year and he commented on a V8BB thread that "having just driven 400 miles on the M4, M5, M6 and M74 today I can assure you that having DRLs on the front of the car is very valuable in dark gloomy weather even on a dual carriageway. If you want to pull out and overtake you need to be able to see vehicles coming up behind. The current trend for dark grey paintwork on modern cars makes them pretty invisible when you steal a quick glance in the mirrors. I use my headlights whenever I think it makes the car more visible, and on today's drive they were on pretty much all the time". The question for many MGV8 enthusiasts thinking of a DRL upgrade is what are the daytime lighting options? Here we review three options for daytime driving: using dipped headlights and fitting DRLs either within the headlamps or as separate lighting units.

What are the aims?

With any project it is always worth spending time clarifying what are the aims and intended outcomes. Clearly there has been a major change over recent years with Daytime Running Lights fitted to new cars produced by all leading manufacturers and they seem to be getting brighter. In some cases the functional aspect is overtaken by the styling features with some of the recent DRLs looking like startled eyebrows with a slightly threatening appearance – the "out of my way" suggestion! For classic car owners there is an additional factor and that is that modern cars are much larger today than they were in 1973 when the MGBGTV8 was launched, so driving it today you do feel an MGV8 is very much smaller. This contributes to the sense of reduced relative visibility on public roads. So the **aim is improving daytime relative visibility of an MGV8** on public roads in the UK retrofitting some form of DRL option.

Typical bright DRLs on modern cars look like "startled eyebrows"

What are the daytime lighting options for an MGV8?

The three options available are:

- **Dipped headlights**
  Clearly the simplest option, possibly with the use of upgraded halogen bulbs providing brighter daytime lighting. The additional benefit is that with dipped headlights for daytime use you also have rear lighting so if road conditions deteriorate, from road spray or mist, you will be visible to other road users behind you.

- **DRLs fitted in the headlamp**
  This option for retrofitting DRLs involves using a replacement headlamp kit, comprising a lens and reflector which has provision for a front sidelight bulb, where a DRL bulb can be used as a replacement. There will be a need for a device (relay) that automatically switches off the DRLs when the headlights are turned on manually for driving at night or in poor daytime driving conditions. For rubber bumpered MGBGTV8s, this DRL arrangement will need modifications to provide front side lighting, probably using dipped headlights when the sidelight switch is used.
  As DRLs provide no rear lighting, in poor daytime driving conditions when it is prudent to have rear lights on, the driver has to remember to turn on the dipped headlights to have rear lighting. There are concerns that some drivers are unaware that whilst DRLs provide good frontal daytime lighting they can be unaware there is no rear daytime lighting with DRLs.

- **DRLs as separate items, typically concealed in the grille**
  This option involves retrofitting a pair of DRL units available from Halfords or other autoparts suppliers. The typical location is in the front grille area but with rubber bumper MGBGTV8s alternative locations will be necessary.

Our analysis below compares these options highlighting the key benefits and disadvantages.

Comparison of the DRL options

Daytime dipped headlights	Daytime Running Lights (DRLs)
Driving with dipped headlights **switched on manually** as a way of improving daytime relative visibility:	Driving with DRLs **switched on automatically** as a way of improving daytime relative visibility.
Frontal visibility: using existing equipment comprising a replacement front headlight reflector able to accept standard incandescent or upgraded halogen bulbs. This assumes most MGBGTV8 owners will have replaced the original sealed beam headlights because they provided inadequate lighting for driving at night.	**Frontal visibility**: using a DRL installation (either using the side light fitting in a replacement RB headlight reflector or using separate DRL equipment) using LED bulbs and a device that automatically switches off the DRLs when the headlights are turned on manually for driving at night or in poor daytime driving conditions.
Rear visibility: existing rear stop and tail lights come on with headlights. Standard incandescent stop/tail bulbs can be upgraded with LED units to provide brighter rear lighting.	**Rear visibility**: standard DRL installations do not have the rear lights on so there will be no daytime lighting at the rear of the car with DRLs turned on.
Benefits & disadvantages Reasonable front daytime lighting aiding relative visibility.	**Benefits & disadvantages** Very good front daytime lighting aiding relative visibility.
No dazzle from headlights during the daytime or in poor driving conditions or at night.	No dazzle from DRLs when driving during the daytime.
Rear lights provide reasonable rear daytime lighting aiding relative visibility.	No dazzle when driving at night because the **DRLs are automatically turned off** when the headlights are turned on manually. **No rear daytime lighting** when the DRLs are on.
Poor daytime driving conditions - driving with dipped headlights is the default state for driving in poor conditions like heavy spray or mist. In those conditions the rear lights are on.	**Poor daytime driving conditions** – as DRLs provide **no rear lighting** the driver either has to turn on manually the rear fog lights or has to turn on manually dipped headlights to have rear lighting. There are concerns that some drivers are unaware that whilst DRLs provide good frontal daytime lighting they can be unaware there is no rear daytime lighting with DRLs
Costs Possibly two halogen front bulbs and two upgraded rear LED stop/tail bulbs.	**Costs** DRL installation (relay & wiring) plus LED bulbs fitted to the sidelight fittings in the headlight reflector.
Areas of concern Selecting upgraded bulbs which meet MOT test requirements and UK vehicle lighting regulations (brightness and technology). Correct focussing of LED bulbs used for headlights in reflectors designed for incandescent or halogen bulbs and compliance with UK vehicle and lighting regulations.	**Areas of concern** No front sidelights on a rubber bumper car if the sidelight fitting in the headlight reflector is filled by an LED as part of the DRL installation. The sidelight switch position will need to be wired so dipped headlights come on. Selecting bulbs that meet UK vehicle requirements and regulations. Correct focussing of LED bulbs used for headlights in reflectors designed for incandescent or halogen bulbs and compliance with UK vehicle requirements and lighting regulations. **Two DRL retrofit options for an MGBGTV8** • **DRLs fitted in the headlamp** Using a replacement H4 Halogen headlamp kit comprising a lens and reflector with provision for a front sidelight bulb which can be used for the DRL bulb is a neat installation. . There will be a need for a device (relay) that automatically switches off the DRLs when the headlights are turned on manually for driving at

	night or in poor daytime driving conditions when headlights are used. • **DRLs installed as separate items** Typically concealed in the grille or in another location at the front of the car.

See links to articles on each DRL option & other useful information

Daytime Running Lights installed in the replacement H4 Halogen headlamp reflector
See article as a V8 Workshop Note. V8NOTE572

Daytime Running Lights as separate units
See article on retrofitting Daytime Running Lights to a classic car by Vic Todman in November 2014. Article

DfT information sheet on DRLs released in November 2010. DfT information sheet

Guidance on Daytime running lights available on the GOV.UK website, published 1 November 2010. GOV.UK

NEWS item: Daytime Running Lights or DRLs and classic car lighting released on the V8 Website in August 2014. NEWS item

Excellent 15 minute video from Holden which demonstrates in a professional way many of the issues you need to address when fitting a Cibie replacement headlamp unit with a domed lens and reflector to take a halogen bulb. Holden video