

MG ZA & ZB Mquette Indicators

Step forward the **DB10** relay

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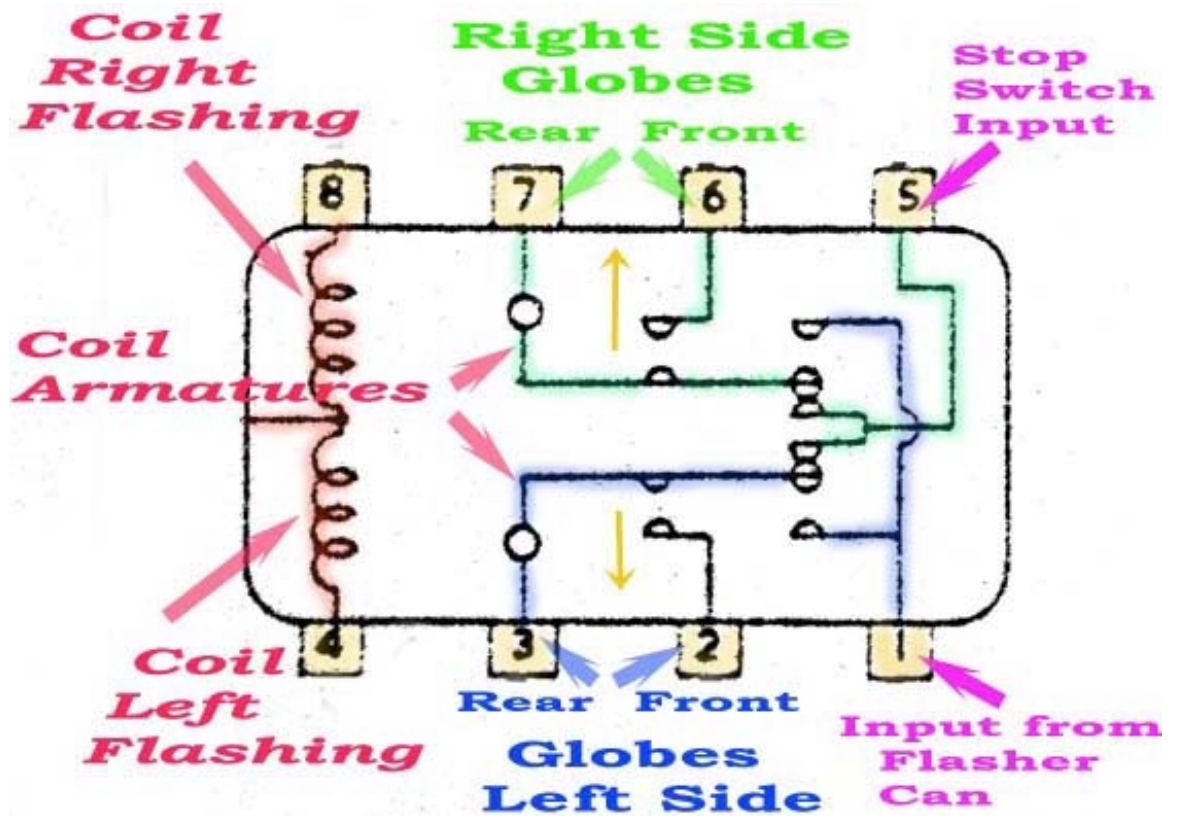


Fig. 3. DB10 Flasher Relay Circuit

1955 – Z Type Magnette with Indicators & Brakes that Wink

[1]

Beginning. In 1955 Export model Magnettes were fitted with flashing indicators in place of the pillar mounted semaphore units. The hybrid arrangement used existing lighting points; double filament globe in front parking lights and shared use of rear brake globe filament.

Flashers or Semaphore units on Z types were fitted as per market demand until 1958. Some other British cars fitted with hybrid flashers were: MG – A { 1500cc}, Roots-Hillman, and Ford – Zephyr.

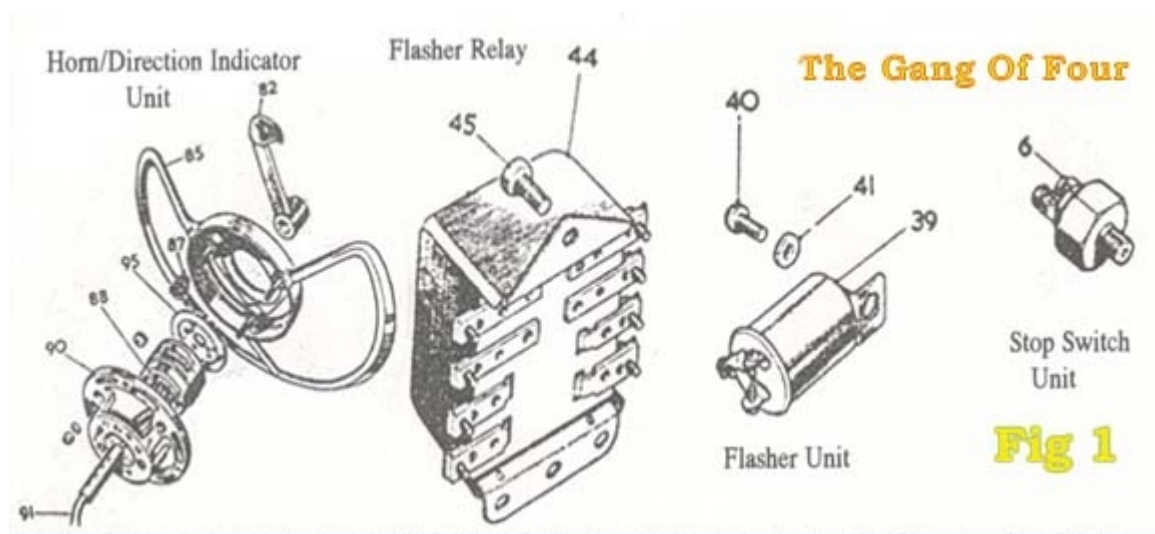


Fig 1 Gang of Four

Basic Operation

Two new players have been added to make a gang of four. A need to fit indicators required the application of Flasher Relay and Flasher Unit to provide a solution.

Figure (2) shows interconnectivity for the following basic functional needs:

One. Indicator lever on the steering wheel center controls whether left of right indicating lights flash.

Two. DB10 Relay primarily allows the braking lights and indicator lights to work separately or safely combined.

[2]Interconnections to DB10

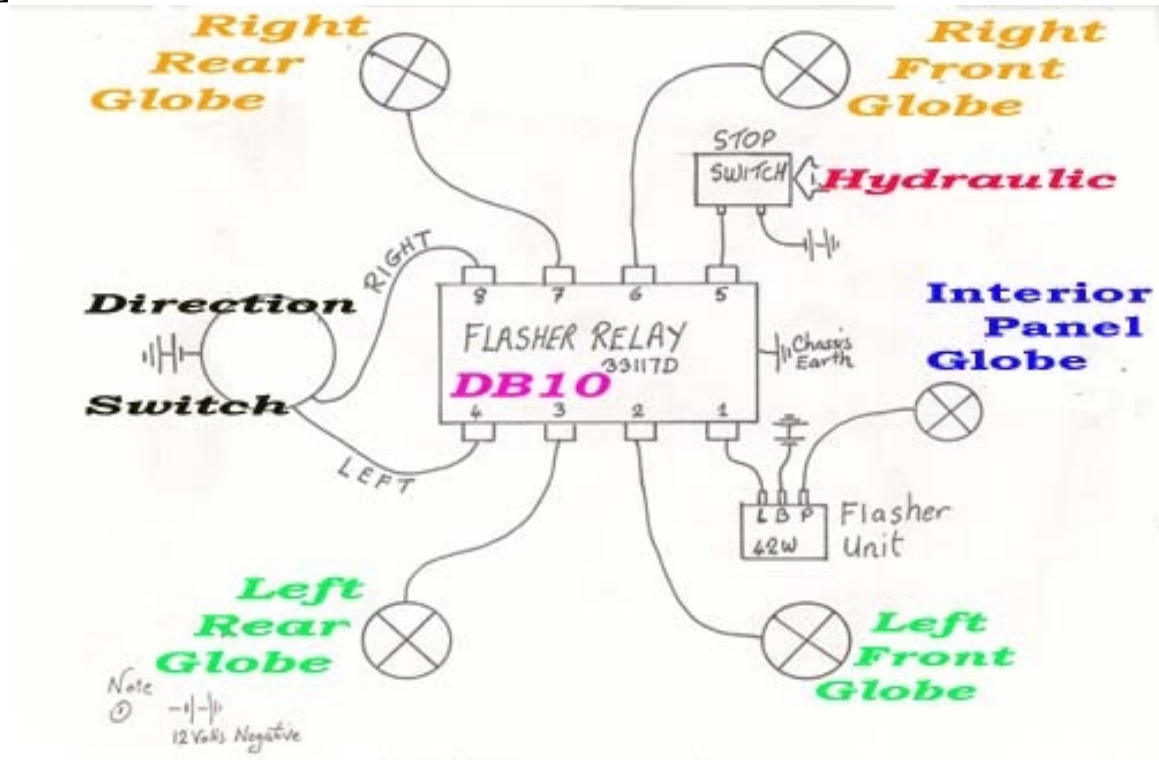
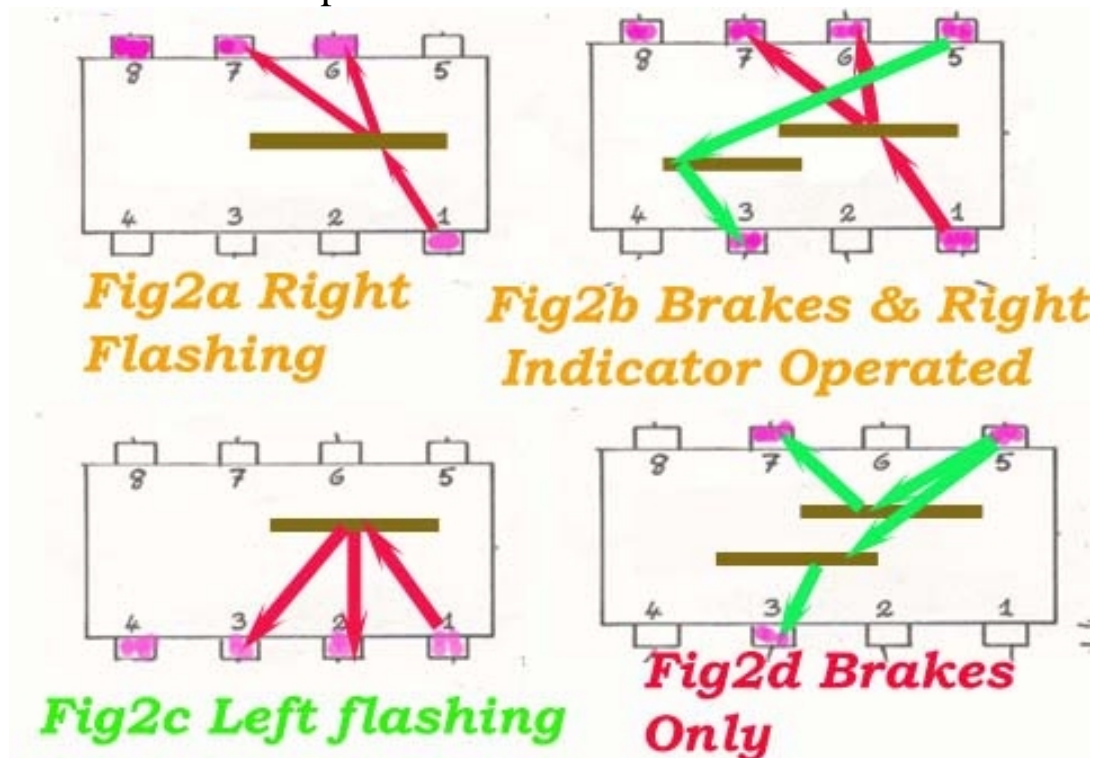


Fig.2 Interconnection for gang of four

DB10 States Of Operation



[3] DB10 Internals & Operation

General. DB10 consists of two relay coils. One for activating right side indicator globes, other to activate left indicating globes. Fig 3 below shows DB10 in idle state.

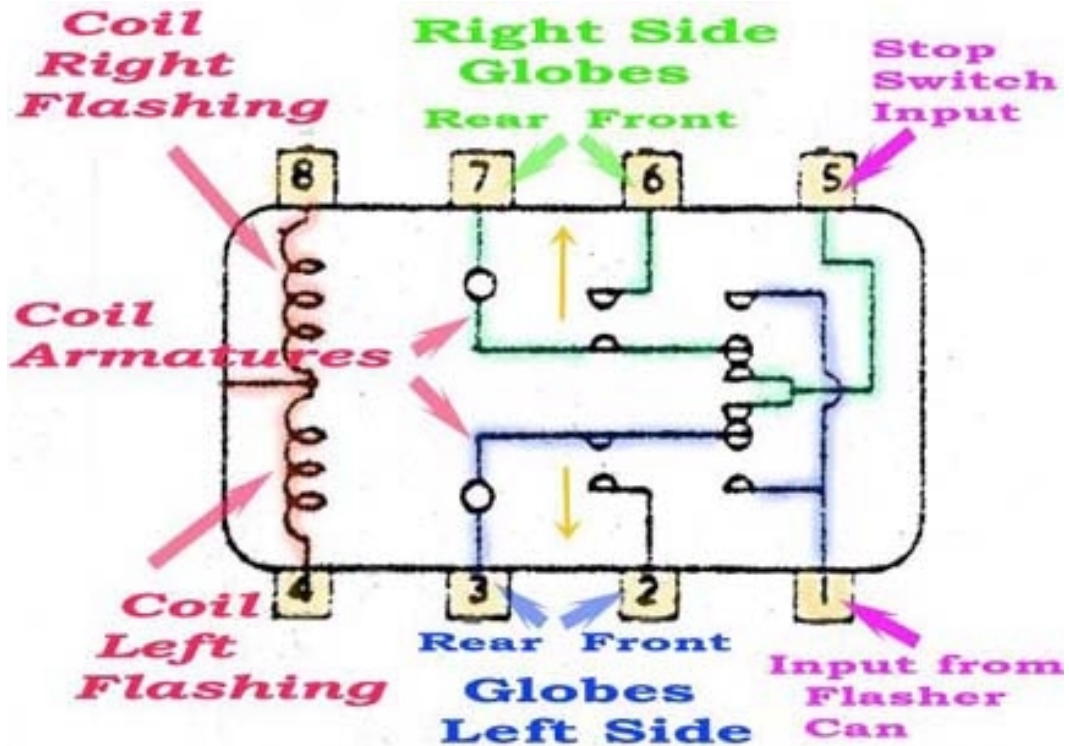


Fig 3 DB10 in idle state

Idle State. As shown in Figures 2d, 3, 4a& 5a, both rear stop lights will glow when foot brake is operated. Stop light circuit activated via tags 5,7 & 3.

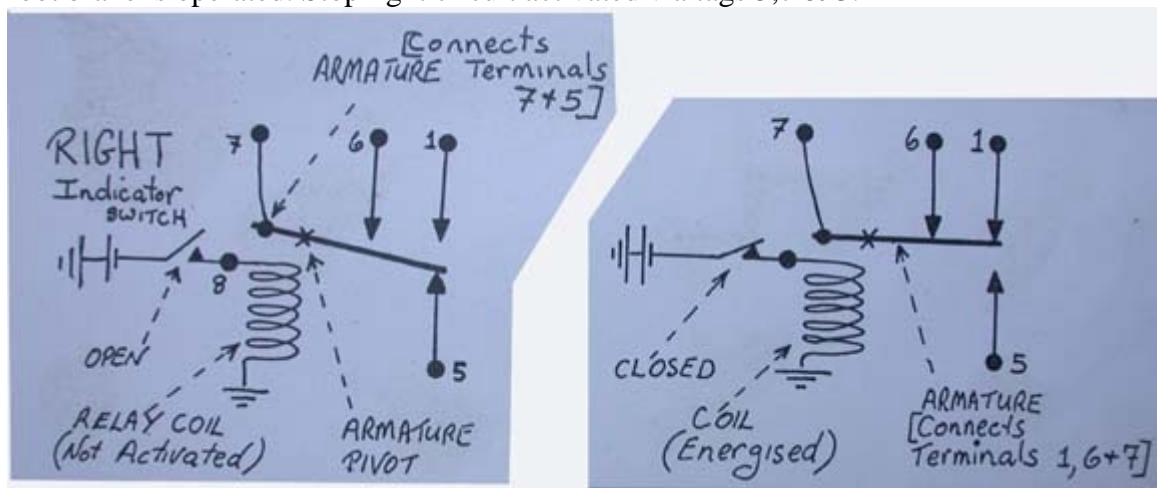


Fig4a Indicator Switch un-operated.

Fig 4b Right Indicator operated

Indicator Switch Operated to the right [Figures 5b, 2a, 4b & 6] activates relay at tag 8; joining tags 1,6 & 7 to flash right side globes. *Note. Right rear stop globe can only flash when brake is also pressed.*

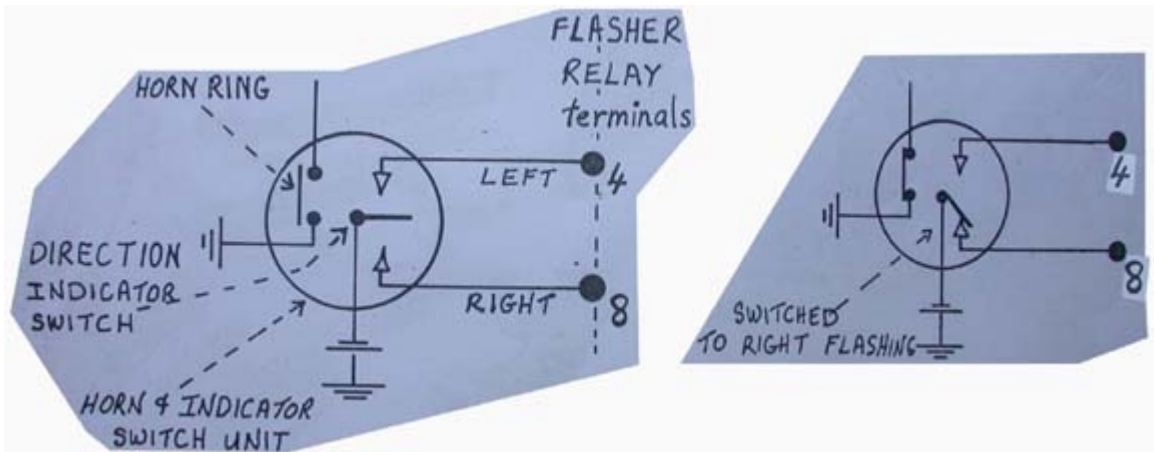


Fig. 5a Un-operated Indicator Switch

Fig. 5b Switched to Right

Indicator Switch {Left} Figures 2c, 3 & 5a show the other relay is energized via tag 4, causing tags 1,2 & 3 to be connected together and flash the left side globes. NB Stop switch now cannot light rear left stop globe, when brake peddle pushed.

DB10 Numbering



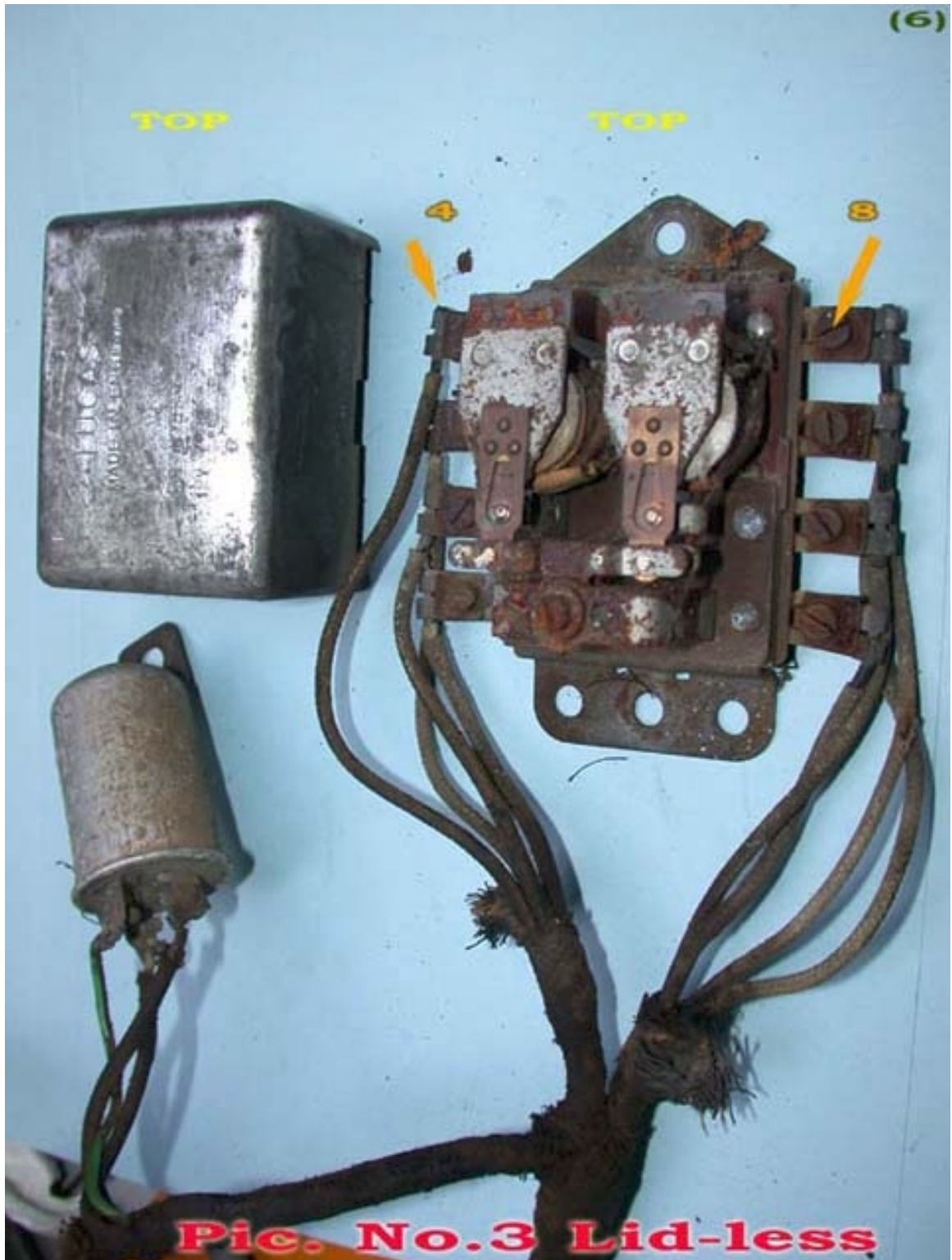
Picture 1. Wire Termination [Tag] Numbering

DB10 Loom and Wiring



Picture No2 DB10 Loom

DB10 Lid-Less



Picture No 3 Lid-less

[6] Replacements.

If the Indicator 'Can' unit goes faulty the options could be to replace with a genuine one or place a modern Indicator Unit {Pic. No. 4} inside a similar, looking, 'Can' to create a replacement.

Consider a modern 'flasher Can' such as HD13. Benefits of Tridon HD13 are: Drives six globes of 25 Watt each, better voltage tolerance, and not polarity sensitive.

Needs. Find Cans that fit together, trim any excess length and glue together with silicone. *NB. Drill a vent hole on bracket side [blind side] to release excess silicone and solder brass bolts to hold wire on tags.*

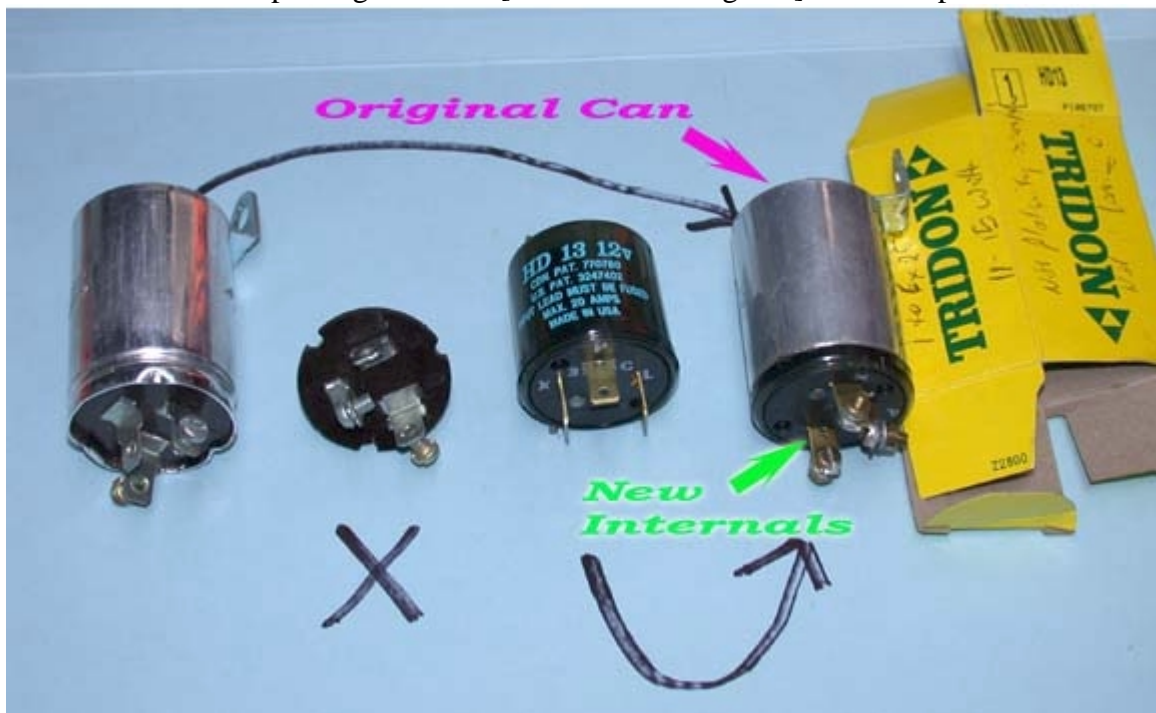
[7] Additional Indicators with minimal change

Consult your local auto electrician first or prior to making any changes!

If a new loom is likely then wires can be included from tags 2 & 6, of the DB10 relay, to the rear for additional indicators [Bracket or body mounted].

Snap connector for existing front indicators can be redirected to new indicators in lieu [Bracket or body mounted].

NB Make sure front parking filament [of dual filament globe] remains operational.



Picture No.4. Replacement Option.

In Summary

Flashing indicators in the first instance [1955 in our case] had to be fitted to cars already tooled for production.

IE. No purpose built indicator lights were foreseen for the MG ZA and MG A , unlike the purpose built indicators of Austin A50 & A55s of the about the same period.

The flasher can had to have a way of operating where only park and brake lights could be used. Solution was provided by the DB10 relay; its design allowed braking and indicating [flashing] to share the brake lights.

In its day the DB 10 relay provided an effective short term solution that now seems odd.

Aim of this document is to remove the mystery from an early part of flasher automotive technology. – Hope this helped.

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Original version Aug '93

Second Version Nov '03

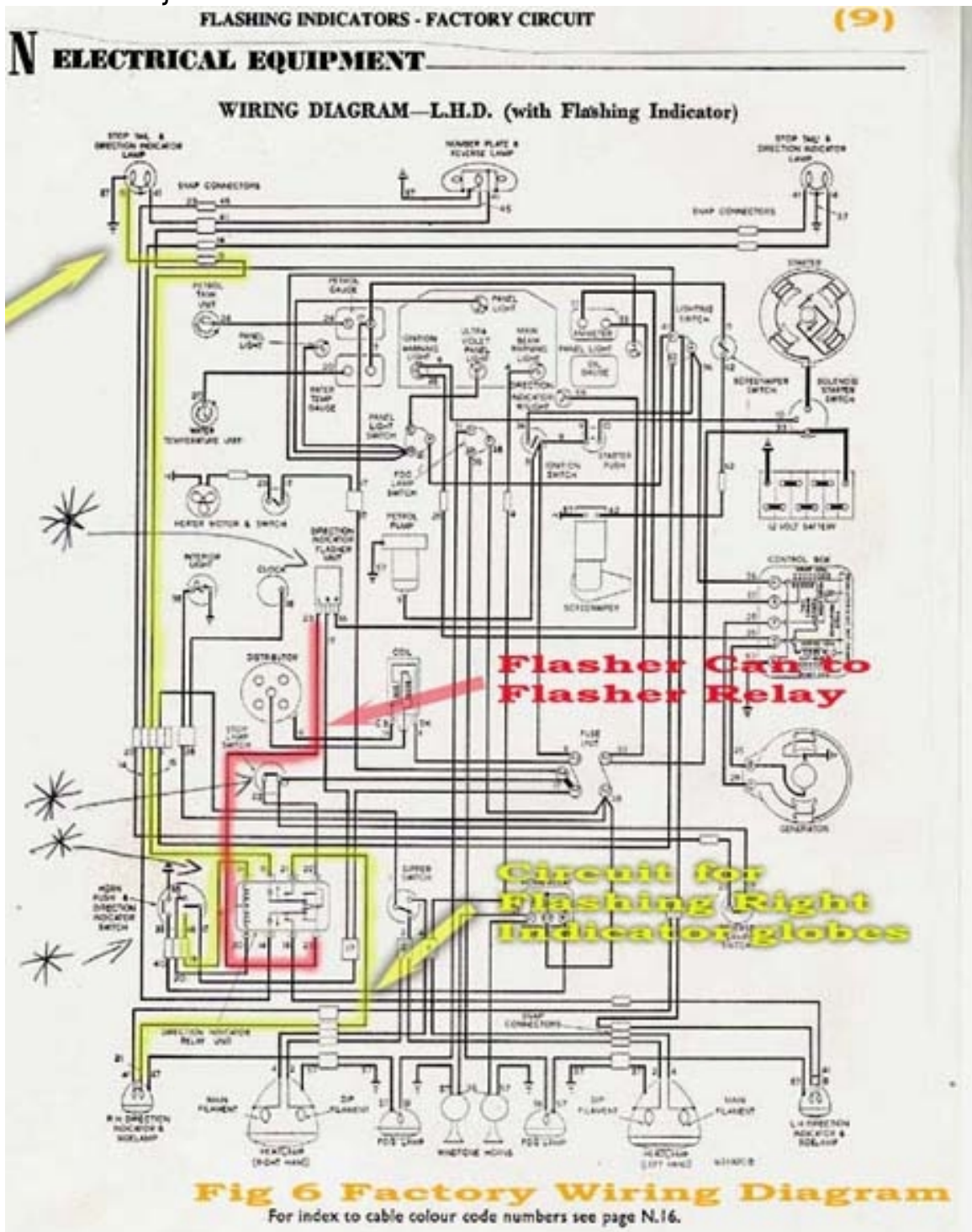
Acknowledge:

Use of MG Parts Book.

Workshop Manual – MG Magnette ZA/ZB

Next and last page shows DB10 relay working in harness.

Wiring Diagram – LHD {with Flashing Indicators}



Take a bow DB 10 relay.

END