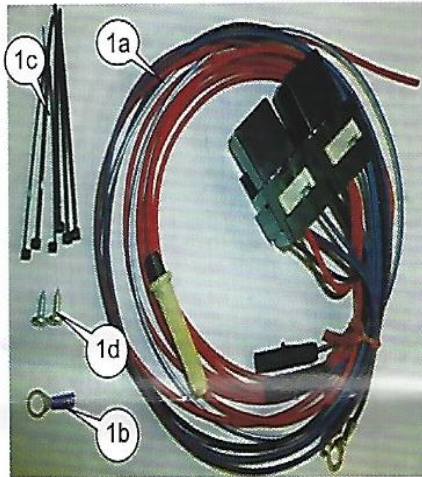


**Supplemental Information & Instructions
for
117-515 Relay & Wiring Kit, Headlights
Suitable for All British Cars, Especially Beneficial for
Vehicles with Halogen or other High-Output Headlights**

Contents of Kit



**Does your headlight switch get hot ?
Are your headlights *as bright as they could be* ?**

This kit

- Adds a fuse to the headlamp wiring
- Reduces switch temperature by up to 44%
- Reduce the loss of headlamp brightness due to voltage drop from 38% to 9%.*

* Rick Astley, *MGB Electrical Systems*

Ref	Part#	Description	Qty
1a	117-516	Relays with wires, Raw	1
1b	772-852	Ring Terminal, 5/16"	1
1c	051-016	Cable tie, 4"	6
1d	323-705	Screw, 10 x 1/2	2

Why do I need a relay kit?

The headlights in our cars are wired directly, meaning all the electric current powering the lights goes through the lighting switch and a relatively long run of wiring. This is significant because the headlights make up one of the highest loads in the entire electrical system. The voltage drop through the wires and switch is significant, and the headlights are not as bright as they could be as a result. Modern cars use relays in the headlight circuit to minimize the voltage drop. Any British car can benefit from adding headlamp relays. The headlights will be significantly brighter, and the useful life of the lighting switch will be extended considerably. Relays are especially beneficial (and strongly recommended) if you have fitted halogen headlamps, which typically have a 60W high beam and a 55W low beam. This is a significant increase over the stock sealed beams that are generally 50W high beam and 40W low beam. According to Rick Astley, author of *MGB Electrical Systems*, after fitting halogen headlights, "the current drawn from the two headlamps rises by 20% and heating in the switches by 44%. On the MGB tested, lamp brightness loss due to voltage drop decreased from 38% to 9% by simply adding relays. By using both relays and halogen headlamps brightness more than doubled over the conventional system."

You will need the following tools

- Wire cutters
- Drill and screwdriver
- Socket set
- Connector Crimping tool

This is a universal kit - there are many ways to install the relays and run the wires. Our instructions outline one way to do the installation.

Instructions

1. DISCONNECT THE BATTERY BEFORE WORKING ON THE ELECTRICAL SYSTEM

2. Choose the location to install the relays in the engine compartment near the headlight harness, making sure the relays can be installed from that location. It is also wise to confirm that there is enough wire to reach the existing headlight wiring harness.

3. Remove the actual relays from the assembly. Use the plastic relay holder as a guide to mark the hole locations.

4. Drill the holes and use the included screws to fasten the relay holders into place. Once they are secure, reinstall the relays.

5. Now it is time to hook up the wiring. The ground wire can be soldered or attached to an existing ground cable using the supplied ring terminal (most cars have a grounded bolt on the top side of the steering rack, see Fig 2).

6. The blue/white and blue/red wires are connected to the regular wiring harness. The wire from the light switch (on the main harness) connects to the wire with female bullet adaptor. The wire from the headlamps connects to the wire with the male bullet connector which is the larger wire.

Note: The factory wire going to the low beams and the factory wire going to the high beams each split so they can feed both sides of the car. You need to connect the leads (with the male bullet connectors from the relays) upstream from the split. Otherwise, only one side of the car will light.

7. The long red wire is for the power to the headlamps. We suggest wiring this to the starter solenoid using the supplied ring terminal. This will provide direct battery power to the headlamps when they are turned on. When you have found your power source, cut the wire to length and crimp or solder on the appropriate connector.

8. Confirm that all your connections are secure and sealed. There should be no exposed connectors.

9. Re-connect the battery and test the headlamps. There will be a small click from the activating relay when you switch on the lights. If everything works correctly, proceed to the next step.

Fig 1



Fig 2

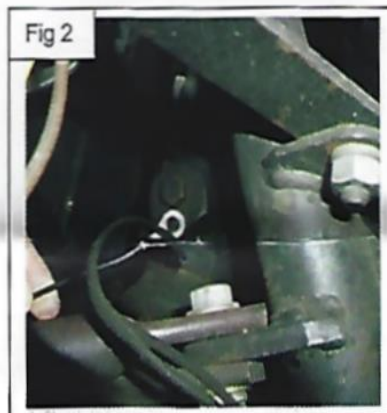
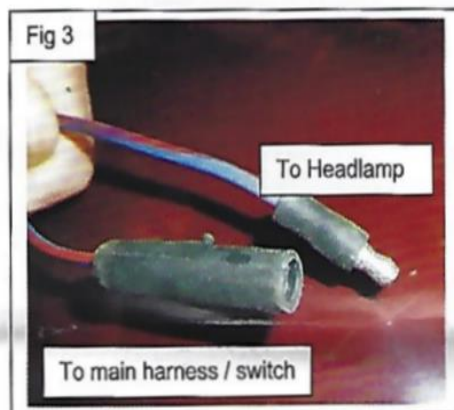


Fig 3

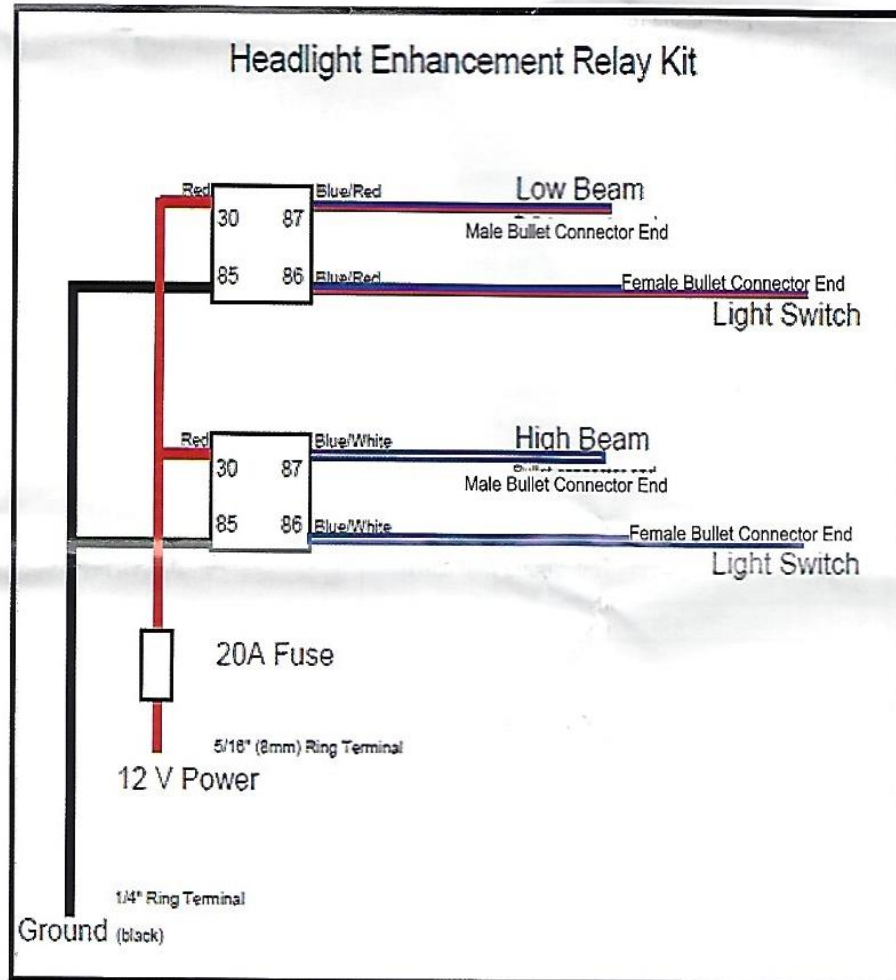


Instructions included with the headlamp twin relays kit supplied by Moss Europe

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Created by Michael Grant on 15 June 2007 Revised by Michael Grant 1 May 2013

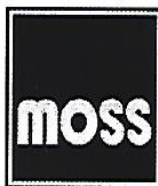
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- 114 10. Clean up the wiring using the supplied cable ties or electrical tape.
115
116 11. Get out and enjoy your British Sports Car without worrying about staying out until dark- enjoy your
117 newfound freedom from the Prince of Darkness!
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Although every effort has been made to ensure the accuracy and clarity of this information, any suggestions that you may have that will improve the information (especially detailed installation notes) are welcome. Please use the simple email form on the **"Contact Us"** page on the Moss website: <http://www.mossmotors.com/AboutMoss/ContactUs.aspx> If you prefer, you may call our Technical Services Department at 805-681-3411. So many people call us for help that we are often not able to answer the calls as fast as we'd like, and you may be asked to leave a message. We apologize in advance for the inconvenience. We will get back to you within 2 business days.



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Instruction Sheet Moss 117-515 June 2011, Revised May 2013

Acknowledgement: instructions with the Moss Europe twin headlamp relays kit.