

Supplemental Information & Instructions for 141-280 or BHA4990 Brake Failure Warning Lamp & Test Switch MGB & MG Midget, 1969-75

A Little History

This combination warning lamp/test switch is mounted horizontally on the far left of the US Spec MGBs and Midgets produced between 1969 and 1975. When the pressure differential between the front & rear brake hydraulic circuit is great enough to cause a piston to move inside the brake pressure failure switch housing (2B), an electrical switch (2A) completes a circuit, causing the warning lamp on the dash to light up. US safety regulations required that the warning lamp incorporate a test function so the driver can manually check to see if the bulb was working. This is accomplished by pressing on the end of the switch face plate (1B) away from the red lens; when pushed, the lamp will light up. If it does not, the bulb will need to be checked. Later warning lamps were designed to test the wiring as well as the bulb.

The original switches fitted in 68-69 had a black bezel. From 1970 on the bezel around the switch was white plastic with a chrome finish. Early switches had 3 terminals on the back, late switches had 4. The early version of this switch (3A) was secured behind the dash with a spring clip (3B), which is unfortunately no longer available.

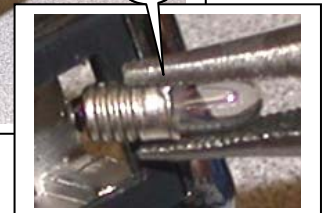
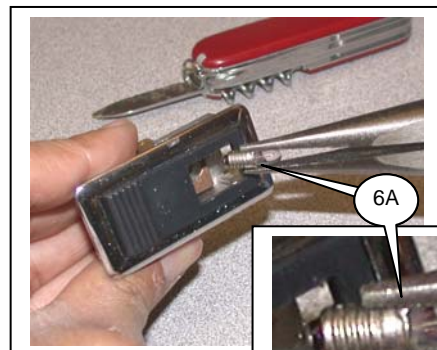
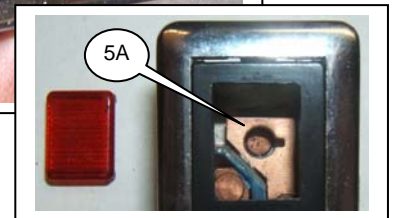
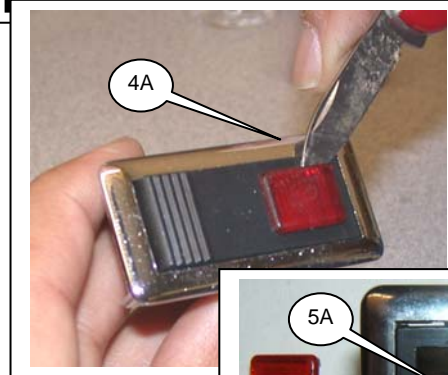
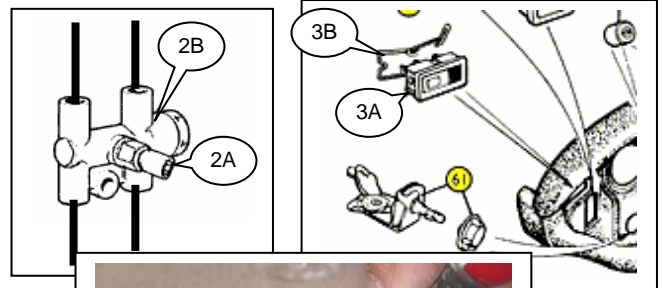
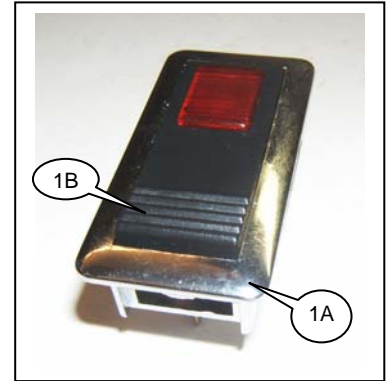
About this Switch

The only switch currently available is a reproduction of the later switch with a chrome bezel (1A) and 4 male spade terminals on the back. We explain how to connect the wiring on the next page.

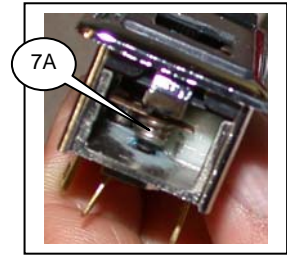
Changing the Bulb (170-160)

These switches have been supplied to us with the 170-160 bulb either installed or supplied loose in the package with the switch. We suggest that the switch be tested for functionality before you install it in the dash. If you need to install the bulb, the following instructions will be helpful. If the bulb is installed, knowing how to replace it will be useful later. Please note: These instructions supplement, but do not replace the factory workshop manual.

- 1) Gently pry up on the edge of the red lens using a small flat bladed screwdriver or a knife blade as shown (4A).
- 2) With the lens out you can see the bulb socket (5A)
- 3) There is no room for fingers here, so you will need a pair of needle nose pliers. Gently grasp the bulb with the pliers as shown (6A). You need to leave enough of the threads exposed on the bulb so you can get it started in the socket inside the lamp.

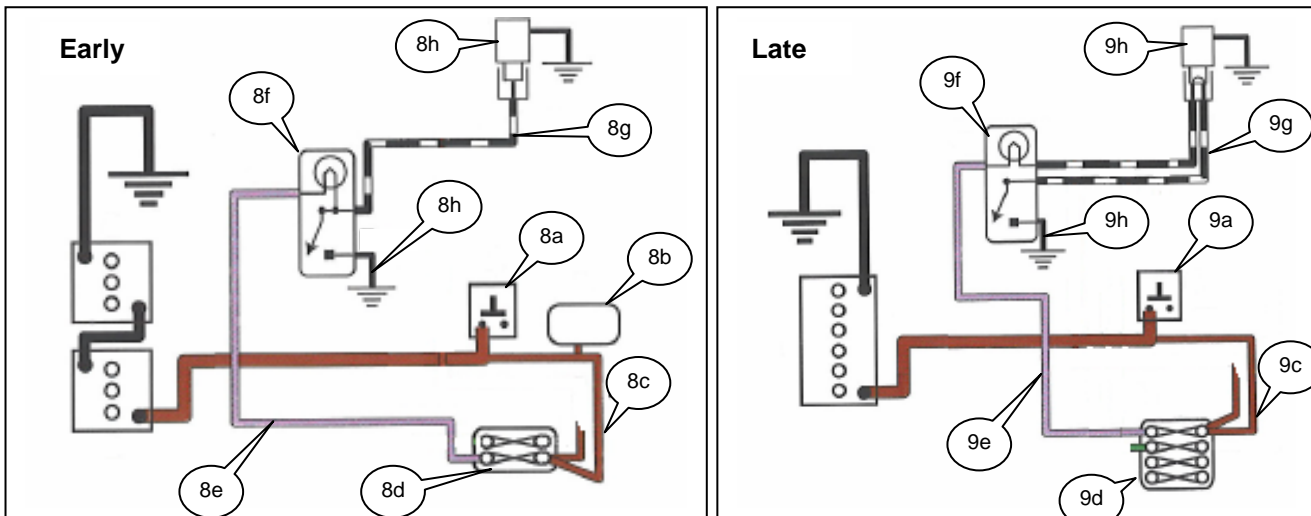


- 4) Insert the bulb into the socket and turn it clockwise to screw it into the socket.
- 5) It only takes a couple of turns to fully install the bulb (7A).
- 6) Test the lamp and switch now, before you put the red lens back in place.
- 7) Replace the red lens and install the switch in the dash.

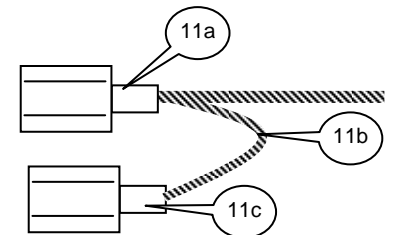
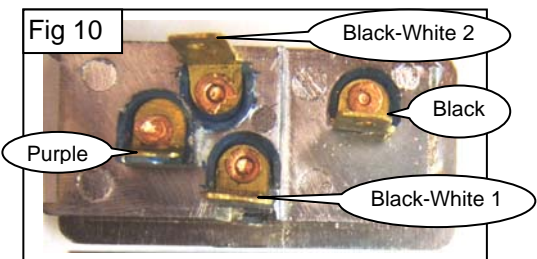


But my warning lamp only has 3 connectors...

The early warning lamp (8f) has three spade connectors, and the later one (and our 141-280) has four (9f). Rick Astley's excellent book **MGB Electrical Systems** (Moss 211-615) has an excellent section on these warning lamps, and the diagrams below are based on the diagrams in his book.



Power from the battery goes through the brown wire (8c, 9c) to the starter solenoid (8a, 9a) and then to the fuse box (8d, 9d). The purple wire (8e, 9e) provides power to the brake failure warning lamp (8f, 9f). The brake pressure failure switch (8h) on the early cars has a single contact and a single black-white wire (8g) going to the brake failure warning lamp (8f). The later cars have a brake pressure failure switch (9h) with two contacts and two black-white wires (9g) running to the brake failure warning lamp (9f). The two contacts in the switch (9h) are jumpered together internally. When the later brake failure warning lamp (9f) is pressed to test the lamp, the bulb will light only if the two black-white wires (9g) are both connected to the brake pressure failure switch (9h). The change was made so that the warning lamp test function would fail if there was a problem with the bulb or the wiring.



Connecting the Wires....Later Cars (2 black-white wires)

If you have a later car with two black-white wires going to the dash mounted brake failure warning lamp, connect the wires as shown in Fig 10.

Connecting the Wires....Early Cars (1 black-white wire)

Option 1: Converting an early car with one black-wire to the later 2 black-white wire system will require a late brake pressure failure switch 141-725 (9h), and a second black-white wire going from the switch (9h) to the warning lamp on the dash (9f). The 141-725 uses a special connector that is not available; improvisation will be required.

Option 2: If you just want to hook up the warning lamp as it was originally, you can modify the existing single black-white wire with the female spade connector (11a) by adding a short jumper wire (11b) and another female spade connector (11c). Now hook up the wires as shown in Fig 10. Either one of the two female spade connectors on the black-white wires can be connected to either of the terminals marked "Black-White1" or "Black-White 2".



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