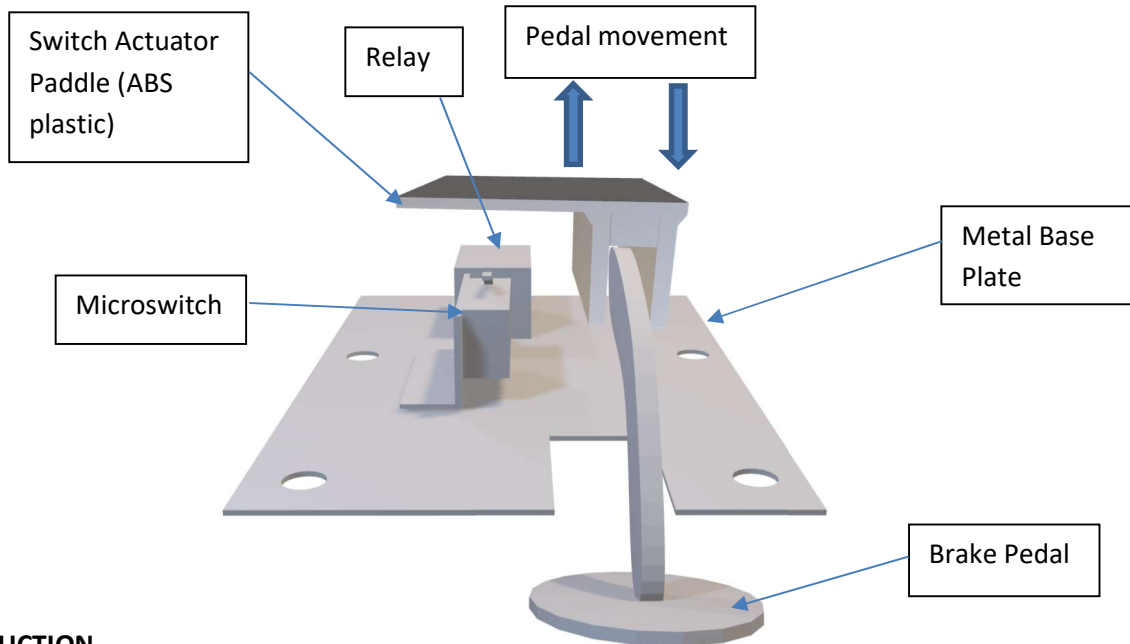


## MORRIS MINOR BRAKE LIGHT SWITCH KIT (Suitable for RHD 'Minor 1000' models only)



### FITTING INSTRUCTIONS



### INTRODUCTION

Fig.1 View of the Mechanical switch assembly as viewed from the inside (above)

Thank you for purchasing the mechanical brake light switch kit for the Morris Minor. It will work either as a direct replacement for the standard hydraulically operated switch or in conjunction with the standard hydraulic switch - if desired – giving a measure of redundancy should either switch fail. (The instructions assume the redundancy option.) Suitable for Positive or Negative Earth vehicles.

### **THIS KIT IS NOT SUITABLE FOR SERIES 2 CARS WITH THE CLUTCH PEDAL INSIDE THE CHASSIS OR LEFT-HAND DRIVE VEHICLES**

The hydraulic switch which was fitted in the factory to all Morris Minors has an inherent problem which is widely known to cause its' premature failure. This is due to the gradual build-up of brake fluid pressure when brakes are applied - which causes slow electrical contact leading to arcing of the contacts and internal heat damage to the switch. This explains why most other cars have a switch which is actuated by the mechanical movement of the brake pedal rather than hydraulic pressure. Even if the hydraulic switch is working, the pedal is often pressed gently, to gently retard the vehicle but not hard enough for the brake lights to illuminate. This can be misleading or dangerous to vehicles following.

The advantage of the mechanical switch is that it will operate the brake lights via a microswitch and relay as soon as the brake pedal is moved and regardless of the pressure applied to the brake pedal.

The above sketch shows a view of the installation from inside the chassis leg, looking down.

## PARTS IN THE KIT

1 x Pre-assembled base plate c/w relay, switch and wiring, 1 x ABS switch actuator paddle

1 x 8mm grommet, 2 x No.6 x 10mm Pan head self-tapping screws, 1 x Small tube of Superglue Gel

## INSTALLATION

The mechanical brake switch unit is designed to fit within the right hand upper chassis leg extension which houses the right-hand drive brake pedal itself and the installation is inaccessible once fitted.

**This operation should be carried out by a competent person with the necessary skills required to complete the task safely and to an acceptable standard of finish.**

Tools required: Phillips screwdriver, electric drill, 2.5 & 8mm drill bits, stiff draw wire, masking tape, spanners as required to remove seats.

- (1) Remove the eight bolts which secure both front seats and lift out.
- (2) Remove the gear lever metal surround and gaiter followed by the front carpet.
- (3) Remove the 32 brass screws holding the gearbox cover floor in place and remove the cover.
- (4) Fit the ABS Switch Actuator Paddle to the brake pedal so that it is just below the curved part of the pedal at the top. (Test the actuation – see next instruction – prior to permanently fixing with the glue.) The plastic paddle plate can then be glued in place using the supplied adhesive. DO NOT ATTEMPT TO DRILL THE BRAKE PEDAL to use bolts etc as it may weaken the pedal itself.
- (5) Trial fit the base plate to make sure there is good contact between the microswitch and the paddle plate. Then fit two of the gearbox cover brass screws to temporarily hold the base plate in place and test that the switch ‘clicks’ when the pedal is depressed and that the brake pedal fully returns to its ‘rest’ position such that the brakes are not ‘binding’. (The metal lever on the Microswitch can be carefully bent up or down to get good contact.)
- (6) Drill 2 x 2.5mm holes through the two smaller holes on the left and right edges of the base plate and fit the two self-tapping screws. This will secure the base plate in the final position **and form the earth contact to the chassis**. Remove the two brass screws.
- (7) Carefully drill an 9mm hole in the engine bay at the front of the R/H chassis leg - as shown in the drawing below - for the wire. Feed the stiff draw wire up through the new hole, rearwards along the chassis leg and up to the brake pedal. Attach the electrical cable to the stiff wire with masking tape and carefully draw it back into the engine bay. The cable should reach to the front of the car where the hydraulic switch is located. Fit the grommet in the hole in front of the chassis leg where the wire enters the engine bay.
- (8) **IF YOU HAVE (LATER) LUCAR FITTINGS ON THE BRAKE LIGHT SWITCH.** Remove the existing lucar terminals from the switch and replace with the supplied ‘piggy back’ connectors to the hydraulic switch. Re-fit the original green and green/purple wires to the piggy back terminals **ENSURING YOU MATCH THE COLOUR CODES** (ie green to green and green/purple to green/purple.) It is suggested that you retain the connection to the hydraulic switch but it’s up to you.

(9) **IF YOU HAVE (EARLIER) SCREW FITTINGS ON THE BRAKE LIGHT SWITCH.** Release the two existing wires on the switch by undoing the two grub screws. Cut off the piggy back connectors on the new wiring and solder the ends of the wires to prevent fraying. Fit the new wires into the switch (matching the colour codes) together with the existing wires just released. (It is suggested that you retain the connection to the hydraulic switch but it's up to you.)

(10) Now is a good time to test the installation and the brake lights should operate after only a small movement of the brake pedal. Make sure you are happy with the actuation point and that the cables are clear of the moving parts etc. Tuck cables in securely and leave wiring tidy.

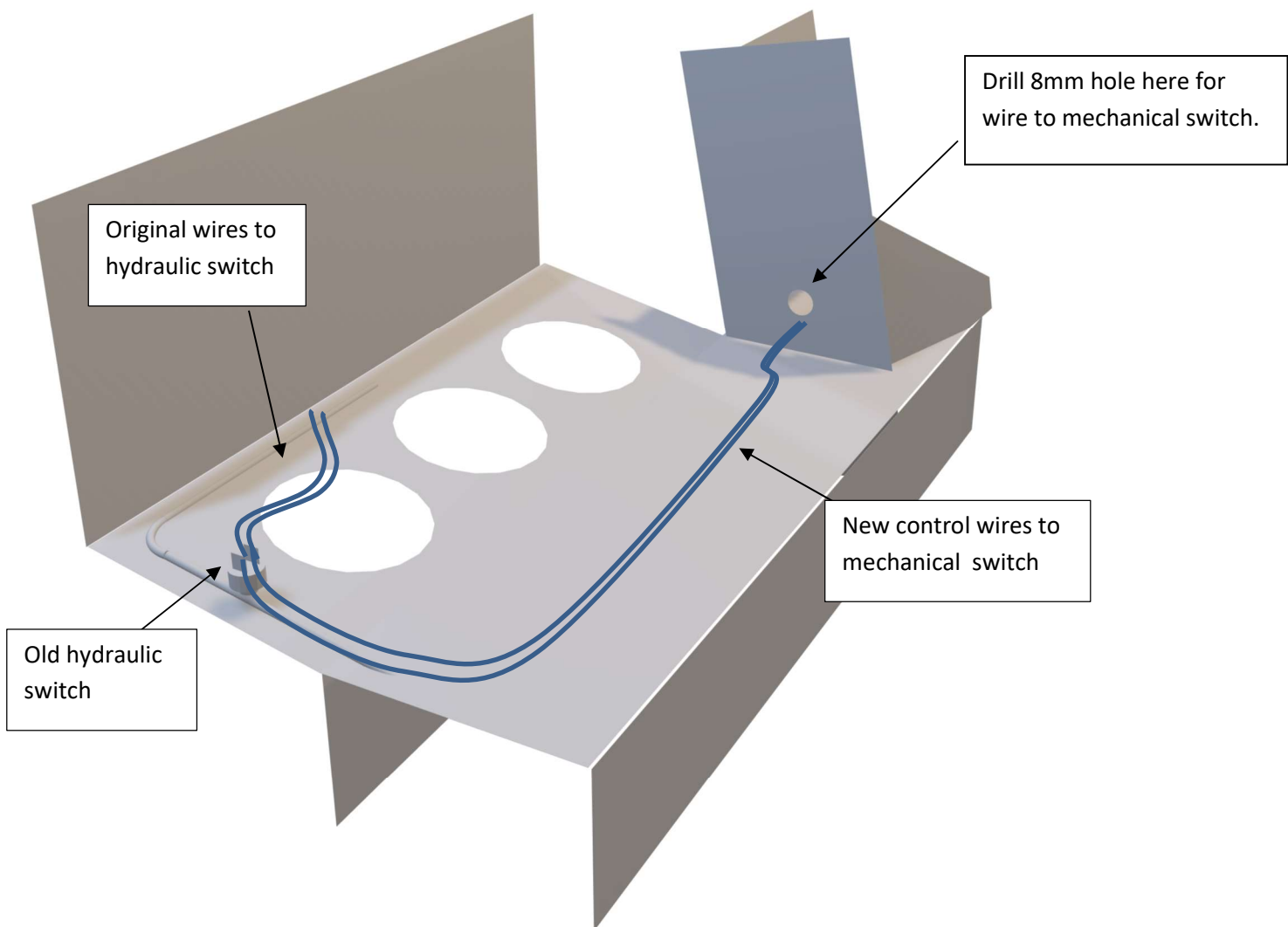


Fig.2 View of RH Engine bay floor showing location of original hydraulic brake light switch and electrical connections

(11) Following successful installation and testing, replace the gearbox cover using the 32 brass screws and washers and replace the carpet(s), gear lever surround and seats.