

MGA Sure-light Brake Light Switch

Installation Instructions MGA 1500, 1600, Mark 1 Deluxe, Mark 2 Deluxe and Twin Cam

Before proceeding:

- Note the distance of brake pedal travel and pressure needed to illuminate the brake lights.
- Check that the brake pedal freeplay is between 1\4" to 1\2". Adjust the push Rod at the Master Cylinder if necessary.
- Check the amount of side-to-side movement in the brake pedal. Excessive movement indicates wear in the brake pedal bushing and spacer.

Other Notes:

- If the installer is confident working near the HOT TERMINAL of the Starter Switch, it is not necessary to disconnect the Ground cable from the battery. If unsure or unfamiliar with MGA wiring, tape a piece of cardboard or other insulating material over the Starter Switch as shown.



-Verify that the ignition key is OFF during installation and only turned ON for testing AFTER an adjustment.

-DO NOT REMOVE THE EXISTING HYDRAULIC PRESSURE SWITCH UNLESS IT IS LEAKING BRAKE FLUID! If the switch is leaking fluid, obtain assistance from a source experienced in brake system repair.

Otherwise remove the switch and plug the opening in the 5-Way Brake Line Connector following safe practices.

Special Note 1:

-Originally, the MGA used a Hydraulic Pressure Switch with two screw-type terminals. Some later replacement Hydraulic Pressure Switches have male Spade-type terminals. The solid GREEN wire and GREEN WITH PURPLE Tracer wire at the hydraulic BRAKE LIGHT SWITCH will have had female Spade-type connectors. If this is the case, contact the supplier of this kit for an interconnect wire which is a short connector wire with 1\4" male Spade connectors at each end to connect the female

Spade connectors previously removed from the Hydraulic Pressure Switch Spade-type terminals.



Tools Needed:

Medium flat screwdriver

Small flat screwdriver or other tool to push wire tips into the connectors

7\16" open or combination wrench

9\16" open end wrench

7\16" socket and small ratchet wrench

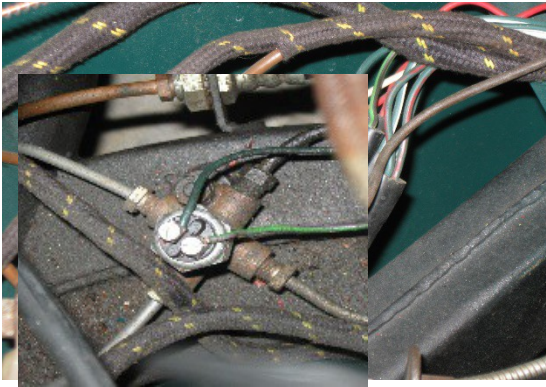
Portable light or Headlamp (recommended)

Initial Under Hood Installation Procedure:

-Disconnect the Air Duct Hose from the Heater Box and move and secure the open Hose end over to gain access to the Wire Harness connections located between the frame and the Starter Switch.

-Locate the connector with the solid GREEN wires. The correct GREEN wire does not have a colored tracer.

-Remove the wires from this connector leaving the tips on the wire ends. It may be necessary to push a wire out of the connector using the Small flat screwdriver or similar tool.



Suggestion: If the connector is very stiff, try heating it with a hair dryer and the wire tip should remove easier.
 -Once the wires are removed from the connector, note that one GREEN wire leads to the existing Brake Light Switch which is mounted on the lower frame member. Push the tip of this wire firmly into one end of the new Single Connector using the Small flat screwdriver. Push the tip of the other GREEN wire, which runs from the main wire harness, firmly into the new Double Connector.

Driver Side Footwell Installation Procedure:

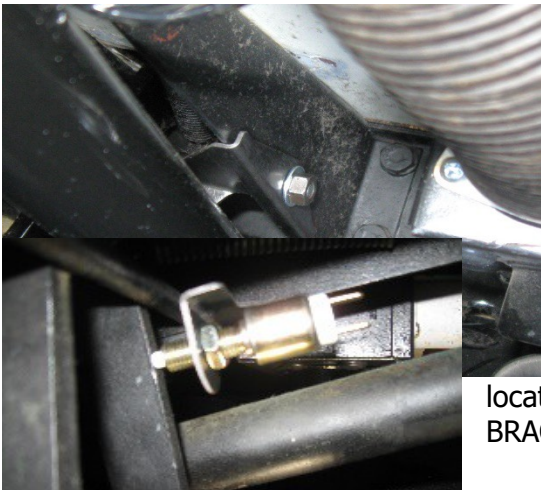
-Locate the Pedal Stop Assembly which is secured with a long bolt and nut that is on the side of the Pedal Support Bracket closest to the Throttle pedal. Remove the 1/4 x 28 nut and split washer.

Special Note 2:

-IF THE HEAD OF THE LONG BOLT RUNNING THROUGH THE PEDAL STOP SLEEVE IS VISIBLE ON THE SIDE OF THE PEDAL SUPPORT BRACKET ABOVE THE BRAKE PEDAL, IT IS NECESSARY TO REMOVE THE 1/4 x 28 FASTENING NUT AND WITHDRAW THE LONG BOLT FROM THE PEDAL STOP SLEEVE AND REINSTALL THE BOLT SO THE 1/4 x 28 FASTENING NUT WILL BE ON THE SIDE OF THE PEDAL SUPPORT BRACKET ABOVE THE BRAKE PEDAL.



New Switch Bracket Installation:



-On the exposed threads of the long bolt, attach the new BRAKE LIGHT SWITCH BRACKET and secure it with the included 1/4" FLAT WASHER and the previously removed 1/4 x 28 nut. (Do not use the split washer that was previously removed.) Before tightening, push the new BRAKE LIGHT SWITCH BRACKET up and against the lower edge of the Pedal Support Bracket.)

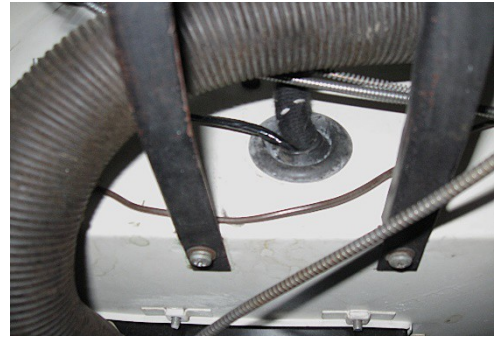
New Switch Installation:

-Screw the NEW SWITCH with the ADJUSTING SET NUT into the new BRACKET ten (10) turns for the initial setting and snug the nut against the bracket. The ADJUSTING SET NUT is properly located between the switch body and the BRAKE LIGHT SWITCH BRACKET.

New Harness Installation:

-Locate the Large Grommet that surrounds the Main Wire Harness where it passes through the Bulkhead Panel.

-Begin the installation of the new WIRING HARNESS by pushing the TWO BRASS WIRE TIPS through the inside edge of the Grommet, along the side of the Main Wire Harness, until about an inch of the WRAPPED PORTION of the new WIRING HARNESS has been pushed through the grommet.



-Run the end of the WIRING HARNESS with the SPADE CONNECTORS along the Bulkhead Panel, above and behind the Cables, Oil Pressure Gauge Tube and Wiring. Continue routing the SPADE end of the WIRING HARNESS to the Pedal Support Bracket and the new BRAKE LIGHT SWITCH BRACKET. Lightly attach the SPADE CONNECTORS to the Terminals on the NEW SWITCH. The SPADE CONNECTORS will be firmly pushed on to the NEW SWITCH terminals after the adjustment and

testing.

Final Under Hood Installation Procedure:

-Reach behind the Heater Box (if present) and locate the TWO BRASS WIRE TIPS and new HARNESS where it comes through the side of the Large Grommet. Gently pull the new HARNESS wire through and route it along the back side of the Existing Wire Harness. Continue routing the HARNESS along the panel to the location of the Wire Harness connections located between the frame and the Starter Switch.

-Connect one of the BRASS WIRE TIPS to the open end of the new SINGLE CONNECTOR.

-Connect the other BRASS WIRE TIP to the DOUBLE CONNECTOR position alongside of the GREEN wire previously inserted into this connector.



-Use the Small flat screwdriver to push the wire tips securely into the connectors. Be sure the tips are fully inserted and there is no portion of the metal connector exposed beyond the Black Insulation Sleeves.



-Locate the Hydraulic Brake Pressure Switch on the lower frame rail below the Starter switch. With a Medium flat screwdriver, loosen the two Screw Terminals at the Hydraulic Pressure Switch, remove the GREEN wire, place it in the terminal with the GREEN WITH PURPLE TRACER wire and tighten both wires under the single terminal screw.

Special Note 3:

(Be sure the wire ends are not frayed, if they are, cut-off the frayed ends and strip 3/16ths inch of the insulation and twist the strands before placing under one of the terminal screws.)

-Retighten the unused terminal screw.

Adjustment and Testing:

-Reconnect the Battery Ground Cable if previously disconnected.

- Turn the Ignition Key on.
- Have an assistant observe the brake lights and announce when the brake lights turn on when the Brake Pedal is depressed. The lights should illuminate when the Pedal Pad is depressed slightly, a 1\4" to 1\2" MAX.
- TURN OFF THE IGNITION KEY!

Special Note 4:

- TURN OFF THE IGNITION KEY when the Spade connectors are disconnected during adjustment to avoid blowing the fuse if the energized wire touches a part of the car.
- If adjustment is needed, remove the Spade connectors, loosen the ADJUSTING SET NUT.
- To DELAY the illumination, turn the NEW SWITCH clockwise and snug-up the ADJUSTING SET NUT.
- To initiate illumination sooner, turn the NEW SWITCH counterclockwise and snug-up the ADJUSTING SET NUT.
- Loosely reconnect the Spade Connectors and re-test with the Ignition Switch ON.

- Repeat adjustment procedure until Brake Light illumination occurs with only a short movement of the Brake Pedal.
- When satisfied with the adjustment, lightly tighten the ADJUSTING SET NUT with the 9\16" open end wrench.
- Reattach the SPADE CONNECTORS to the NEW SWITCH terminals. Push firmly to a fully secured position.

NOTES:

- Excessive side-to-side movement of the Brake Pedal indicates wear in the Brake Pedal Bushing and Spacer. Excessive side-to-side movement may require replacement of the worn parts. Verify that the NEW SWITCH plunger tip contacts the front edge of the brake pedal when the pedal returns to the rest position.
- If a replacement Brake Light Switch is ever needed, obtain a brake light switch for a mid-1980's Nissan Sentra from a local Auto Parts Store, NAPA, Rock Auto or Nissan Dealer and follow the Adjustment and Testing procedures.

Now your MGA Brake lights will illuminate before pressure builds in the system. The brake lights can now signal the intent to slow down to motorists that are following behind.

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