

Sunbeam Mechanical Brake Switch

I have run mechanical brake switches on my Sunbeams for many years. I made this change because of the poor life expectancy of the OEM hydraulic switches. Admittedly, I was running DOT 5 Silicone Brake Fluid in most of my applications, which may or may not be responsible for the repeated failures of this switch. I started out using electronic switches, mainly the Microswitch brand. The Microswitch units made the bracket more complex and expensive, so when I was asked to make this kit available, I chose a switch with automotive applications to make it more cost effective.



Figure 1. Here's the bracket that fits behind the brake pedal.

The bracket I designed for this switch is very simple but effective. The material is 16 ga. steel. It is mounted to the cowl box using two sheetmetal screws. You can use the switch and bracket assembly to mark the slots on the bottom of this box, but you may want to remove the OEM insulation as shown in figure 3.



Figure 2. This is the switch mounted in the bracket.

My original choice for the switch became obsolete, so the current configuration is shown in Figure 2.



Figure 3. Here's a shot of the switch in position. Note that this photograph was a prototype and the current switch is slightly different.

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As shown below, the two screw holes are toward the rear edge of the cowl box. Simply hold the assembly in position behind the brake pedal and mark the slots on the cowl with a Sharpie or similar pen. The drill holes for the mounting screws. I use #10 screws which require a drill in the range of 29 or 30. I try and drill in the doubled thickness area for maximum strength. After drilling the holes, install the screws, tighten and remove them to make the final installation a little easier.



Figure 4. While holding the switch assembly in the position shown in Figure 3, mark the slots for drilling the holes to accept the mounting screws.

Now it's time to install and adjust the switch. Alignment with the brake pedal shaft should be obvious. You will want the circuit open when the pedal is in the up position, and you want it to close very soon after the pedal starts traveling down. The switching point can be felt but you can also use a multimeter to verify the switch-



Figure 5. Here's the installed switch, again with the prototype switch.

ing point and correct operation behind the pedal. Note that I use my pedals in the forward hole. If you prefer the rear pedal hole and lower pedal, your switch mounting point will obviously be different.



Figure 5. Here's all you need for wire to install the switch.



Figure 6. This spade doubler goes on your ignition switch on the terminal with the green wire. This will give you key switched power to operate your brake lights.

The wiring couldn't be much simpler. Apply the doubler to a terminal on your ignition switch to obtain a keyed 12 volt source. This wire goes to the switch on either terminal. The other switch terminal runs over to the rear wiring loom on the left side of the dash. The green wire with the purple stripe runs to your tail lights. Simply plug the bullet into the connector and you're all done. If you would like to run your hydraulic switch in parallel with this switch, you will have to locate a bullet doubler so that you can use both leads to feed the tail light wire.

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Figure 7. Here's a shot of the green purple stripe wire, just before it heads behind the kick panel.

Kit Contents:

1. 16 Gage Bracket
2. NAPA SL 234B
3. Spade doubler
4. 12 volt jumper wire
5. Jumper wire to tail light harness
6. Spade terminals and bullet
7. Two #10 sheetmetal screws