1930 - 31 Model “A”
Brake Light Switch Modification

Why our brake light switches sound like a well-used mattress from a house of ill repute, makes no sense to anyone in 2019. It sure is nice we get all the attention that we do in our vintage cars, but as soon as we hit our brakes, the sound of a mattress in use comes to mind. Not only is it horrible, but it's also embarrassing. How can we hold our heads up in pride while driving our beauties if we have to hide the moment there's a need to step on the brakes?

The solution is to buy a better brake light switch for $49.99, or one modifies the $14.99 brake light switches that all the Model A parts houses carry. The more expensive ones have bushings that the actuating rod slides in. The cheaper version does not. The cause of the problem comes from the sound of steel on steel scraping being amplified by the spring and it sounds horrendous. Adding a brass bushing eliminates that sound once and for all. This modification removes the steel on steel scraping by having the rod ride inside brass bushings. This modification is quite simple if you possess the skill to solder. The only material needed is a small piece of brass tubing with a 3/16" (.187") I.D. The Tubing that I use, is the most common brass tubing on the market. The brand is K&S and can be purchased from most hobby shops, craft stores, or online.

Only a quality soldering iron of 60 watts or better should be used. A cheap soldering iron won't do the job. An adjustable temperature soldering iron capable of 700° F with a broad tip is preferred. If you don't have one, if possible, locate a friend that does. Silver solder and Silver solder flux are also needed for a good solid solder joint.

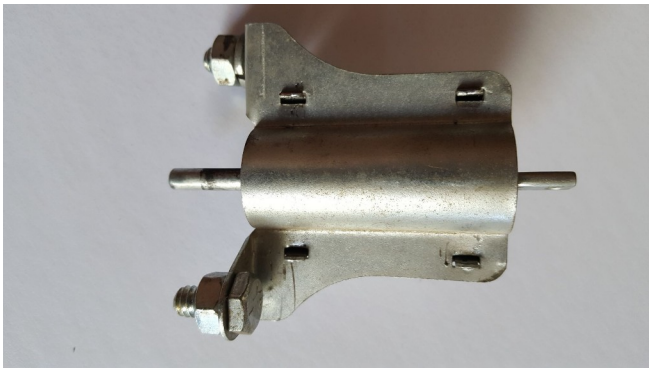
*Estimated time of modification; 20 minutes.

List of items to have handy:

Soldering iron 60+ watts
Silver solder and silver solder flux
.187" (3/16") I.D. (Inside Diameter) brass tubing
Drill press or hand drill and a drill-bit
Dremel tool with cut-off wheel attachment
Fine jewelers file
Sandpaper (any grit will do)

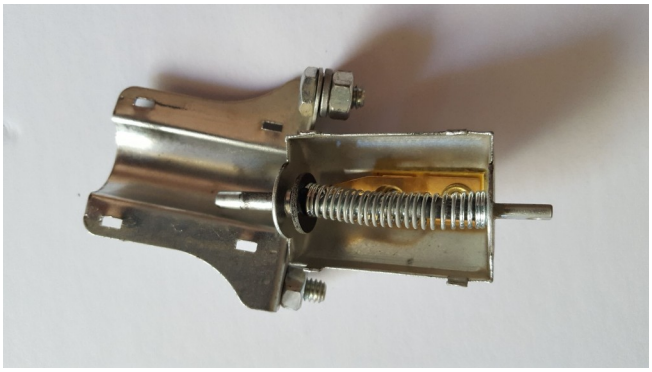
The complete disassembly of the brake light switch is required, so let's get started.

1). Use a small flat blade screwdriver to carefully work under the four tabs and pry them up vertically. Use caution to ensure you don't injure yourself while prying. (See picture 1)



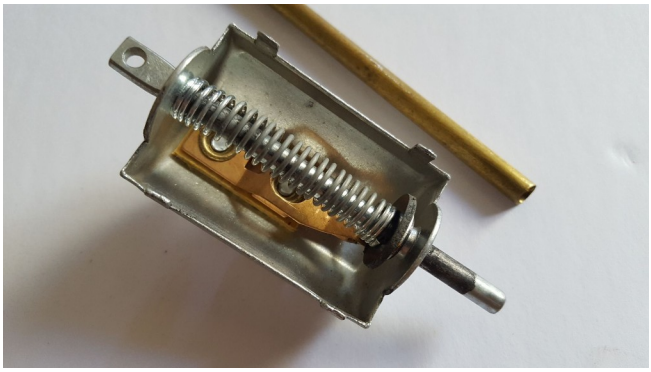
Picture 1

2). Carefully separate the switch into two halves and set aside the half with the mounting tabs. (See picture 2)



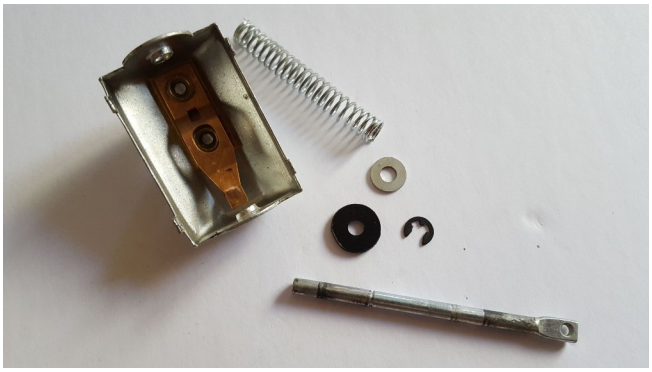
Picture 2

3). Carefully slide rod and spring assembly rearward and use a small magnetized flat blade screwdriver to remove the small E-clip. Special care should be taken here so it's not lost. Also, take care when removing the rod, spring, fiber washer, and steel washer so they don't go flying into oblivion. (See picture 3)



Picture 3

4). Remove the screws from the electrical connecting points Set the spring, fiber washer, steel washer, E-clip and electrical connection screws aside. (See picture 4)

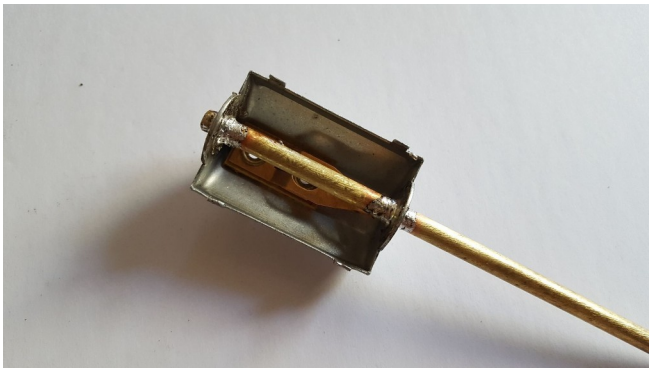


Picture 4

5). Measure the O.D. of your Tubing and use the same sized drill bit. Drill using the "in-line" technique by using the existing hole locations in the switch housing. Do - Not drill from both ends. (See picture 5)

Picture 5

6). Lightly sand the brass tubing and the light switch housing holes to clean and prep them for soldering. Insert the brass tubing into the housing, it should be a snug fit. Apply silver solder flux at the four locations that are on either side of the tubing where it runs through the light switch housing. Now apply silver solder to all four locations and let cool. (See picture 6)

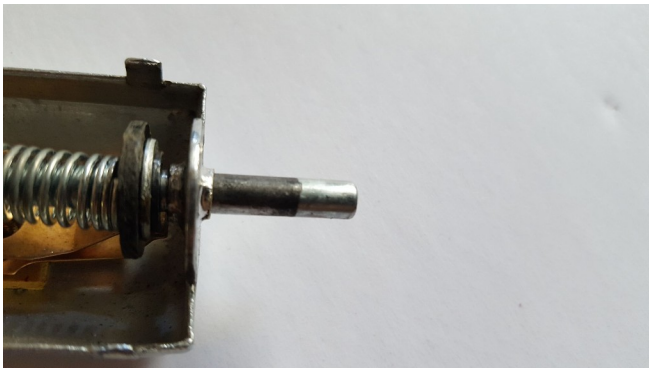


Picture 6

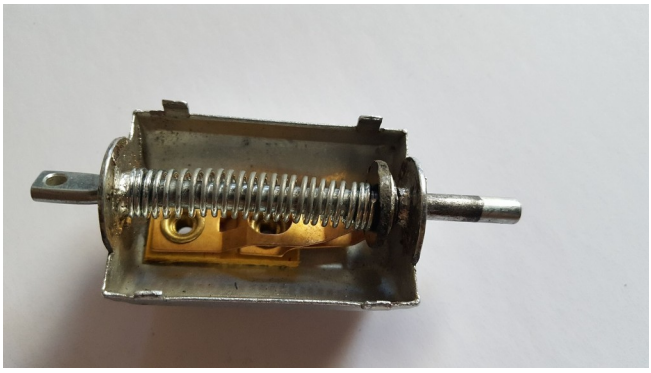
7). Use a Dremel tool with a cut-off wheel attachment and cut the tubing, so 1/8" (.125") remains on both side of the switch housing walls. Clean up all four cuts with a small jewelers file and sandpaper. (See picture 7)

Picture 7

8). Reassemble the brake light switch internal components. The order of installation is: Insert rod, spring, fiber washer, steel washer, E-clip. NOTE: On some switches, the order of washers are needing to be reassembled differently depending on the O.D. of the steel washer. Some have a larger steel washer that contacts the copper tabs inside the switch. To fix this, either switch the order of the washers or find a smaller O.D. steel washer. (See pictures 8a and 8b)



Picture 8a



Picture 8b

9). Assemble the two switch housing halves together and carefully bend the tabs back to their original position with a small flat blade screwdriver. Once again, care should be taken not to injure oneself. Install the electrical connection screws if you have not already done so. Finally, add a drop of motor oil to the actuating rod at each bushing and work the rod back and forth a couple of times ensuring the oil is inside the bushings.
(See pictures 9)

Picture 9a

Picture 9b

I really hope this helps end your embarrassment every time you need to step on the brake pedal as it did for me. Finally, now we can drive with our chins firmly held high and enjoying every minute of driving in our vintage Model A's.

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