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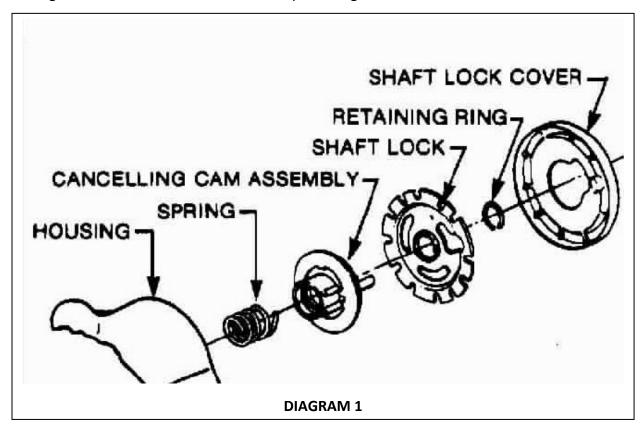
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DIAGRAMS

Cancel Cam and Shaft Lock

These were the best diagrams I could find of this part of the assembly. Most diagrams do not include the *shaft locking plate* (which is a combination of the *Shaft Lock Cover* and *Shaft Lock*) in Diagram 1. Three screws hold these two pieces together.



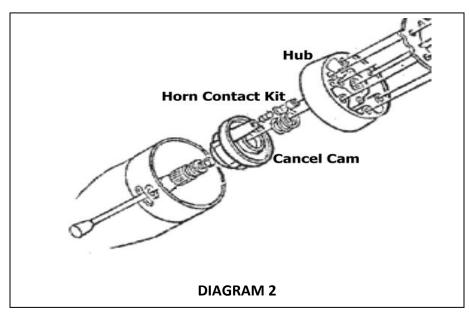




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Horn Contact Kit and Cancel Cam

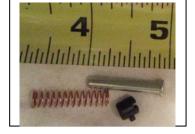
Diagram 2 shows the *cancel cam* and *horn contact kit* in relation to the hub and shaft spring. Please note that in this diagram, the *shaft locking plate* is missing!









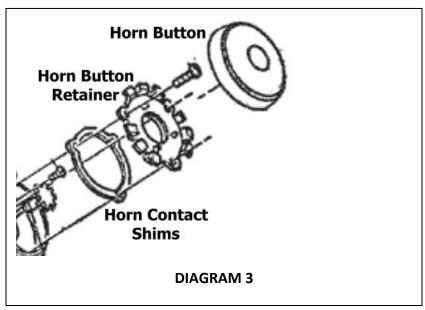




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Horn Button, Retainer and Shims

Diagram 3 shows relationship of *horn button*, retainer and shims. Note that the *horn button retainer* is comprised of three pieces. Two metal pieces with a thin layer of plastic between them, held together by three insulating plastic rivets.





Horn Button Retainer



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INSTALLATION DETAILS

Wheel Alignment

Before beginning, ensure that your front wheels are pointed straight forward. In order for the horn to work correctly, the parts must be installed in a certain position on the steering shaft, which is controlled by the *shaft lock*. The following photo shows how the large flat tab on the steering shaft must be at the top. If it isn't, turn your wheels so that it is at the top; you may need to later have a wheel alignment to set your steering wheel straight. Please note that there is also a vertical mark on the end of the column to show correct alignment.



Install the *shaft spring* onto the *steering shaft*.



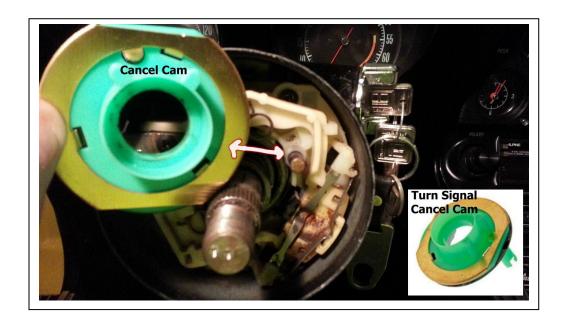
The horn contact, which is the button on the right of this photo, when grounded to the shaft, should sound the horn. Use a piece of wire or even a screwdriver to test this. If it doesn't sound, you have another problem besides the parts in the upper steering column.

It should be a given that during installation, the battery is disconnected.

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Cancel Cam

The circular strip on the back of the *cancel cam* will maintain contact with the *horn contact* button in the *turn signal assembly* as the *steering wheel* turns.



Push the *cancel cam* onto the *steering shaft*, making sure the *horn contact* piece that extends outwards is offset at about 45° to the left of vertical, as shown in this photo. Please note that this is a tight fit and it may be better to push the cam onto the shaft using the *lock plate* as shown on the next page.



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Shaft Lock Plate

I separated the two pieces of the *shaft lock plate* and installed the first piece as shown in the following photo so that you can see how the column lock button at the top can engage with the *shaft lock plate*. This also shows approximate location of the *cancel cam*.



Install the *shaft lock cover* and the three screws that hold them together. Please note that the *shaft lock plate* has grooves and can only be installed in one position. A *locking plate clip* is then installed – mine was missing so I didn't show it here, but in the above photo you can see a groove in the column where it slips.



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Hub and Lock Nut

Install the *hub* so that three screw holes marked in red in the following photo are in the same position as shown. You may need to carefully rotate the *cancel cam* so that it fits through the hub and still allow the hub to remain in the position shown.

The three screw holes indicated by red dots show where the horn button retainer is attached.



Install the bolt and washer as shown.

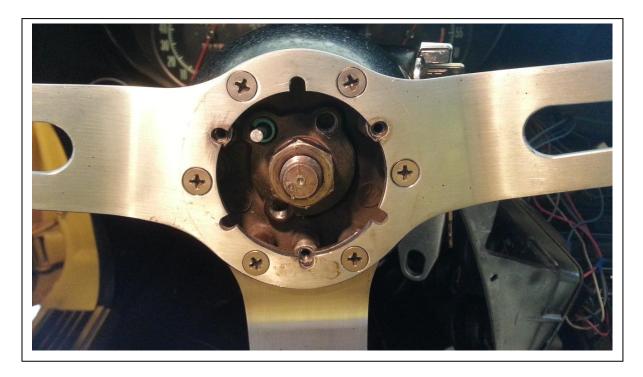
Please note that this is a good photo to show the vertical alignment mark at the end of the steering column.



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Steering Wheel

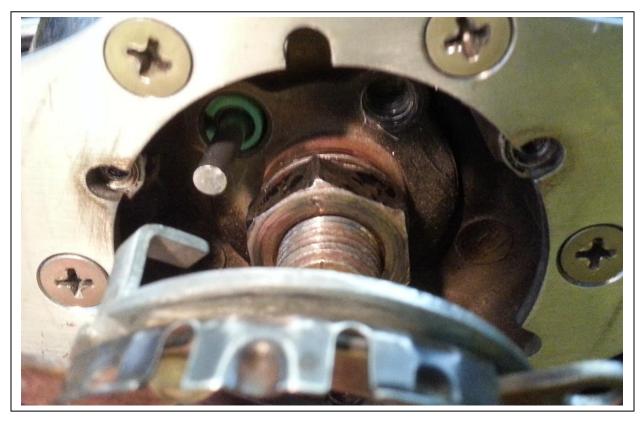
Install the steering wheel using the six stainless steel screws.



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Horn Button Retainer

The *horn button retainer* needs to be installed so that the tab protruding from the bottom makes contact with the *horn contact kit*.



Shims will probably be required to go between the *retainer* and *steering wheel*. The purpose of the *shims* is to provide enough room for the *horn button* (and therefore the *horn button retainer*) to be pressed without hitting the *steering wheel*.



Here I used two shims. Please note that when ordering shims, some only come with one shim. You may want to order a pack of three.

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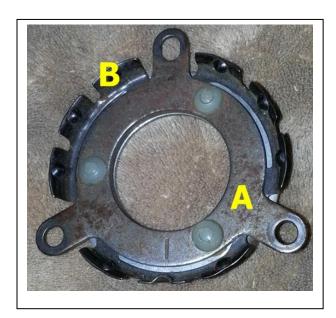
Horn Button Retainer – How it Works

Now let's take a close look at how the *horn button retainer* works. The retainer is comprised of two metal pieces separated by a plastic insulator with plastic pins.

The actual *horn button* attaches to the metal piece labeled as "B". This piece has the metal tab underneath that makes contact with the horn contact. The *horn button* slips inside this piece.

The piece to be screwed to the hub is labeled "A". The insulator and pins that electrically separate "A" and "B" can be clearly seen. Piece "A" is grounded because it's screwed to the *hub*, and therefore the *steering shaft*.

Piece "B" is flexible and when pushed, makes a connection with piece "A" and is grounded, causing the horn to sound. There are no springs involved with these workings.

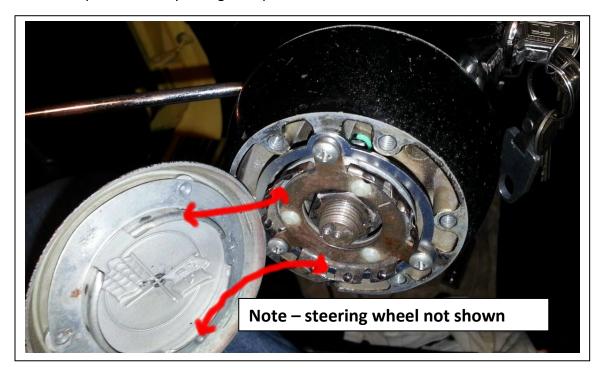




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Horn Button Fitment

The circular clips on the *horn button* fit **inside** the clips on the *horn button retainer*. The horn button can be pried off easily with gentle pressure.





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