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605 Power Steering Installation with Original Steering Column

Classic Performance 1955-57

605 Power Steering Installation with Original Steering Column

Courtesy of Danchuk Manufacturing



For those of you who would rather not spend the money for a new column or just really like the look of the stock steering column our 605 Power Steering Conversion Kit makes it possible to have power steering while retaining a totally stock appearance. In this article we show you what is involved in modifying your stock column to work with the 605 power steering box.

Most of the work can be performed by the average "backyard" restorer but, some precision cutting and welding is necessary, so we recommend that you read the entire article through and decide if you would like to seek the assistance of a qualified machine shop. Something else we think we should mention, the measurements used on our car worked perfectly for us but all cars tend to vary slightly and you should double check all dimensions to assure that they will work for your specific car.

- 1.) The first step in the removal of the steering column is to remove the steering wheel and horn assembly. Remove the horn ring cap and horn ring by removing the three Phillips head screws that secure it. Now you want to note the position of the pieces for re-assembly later. Note: On Belair models the horn ring cap is retained either by a clutch head style screw
- 10.) Remove upper cover using a medium sized fiat head screwdriver to carefully pry off (it's retained with spring clips).
- 11.) Remove the shift indicator wire by unhooking the wire from the indicator needle assembly and the steering column wire loop.

605 STEERING BOX INSTALLATION

Our modified box makes this extremely easy.

1. Bolt on box in the stock position.

which is removed from the under side of the steering wheel or clips.

2.) Now using the ratchet, extension and 3/4" socket, remove the retaining nut that secures the steering wheel.



- 3.) With the help of a steering wheel puller you can now remove the steering wheel.
- 4.) With the wheel off you should now remove the spring and spring seat from the end of the shaft.
- 5.) Remove the shifter arm by driving the pin out using the ball peen hammer and 3/16" punch.



The spring on the ball end of the lever needs to be removed and retained.

6.) Remove the neutral safety switch by first pulling the wires, noting the connector positions for re-assembly, then using the Phillips head screwdriver remove both retaining screws. The switch fastener ears are slotted to allow for adjustment during re-assembly.



- 7.) Disconnect the turn signal/horn wiring harness located on the left side of the column under the dash.
- 8.) On 55-56 vehicles, slide the rubber seal up far enough to allow you to get at the clutch head screw retaining the lower cover.



- 12.) Remove the inside steering column clamp by removing the two bolts using your 1/2" socket with a small extension. Be sure to inspect the rubber shim/insulator for damage or wear prior to reassembly.
- 13.) From under the hood, disconnect the transmission shift linkage rod at the steering column shift arm using a 1/2" wrench. Also remove the shifter arm detent from the bottom of the column using a 3/8" deep socket.



- 14.) Disconnect and remove the lower clamp by removing the two bolts securing it with your 1/2" wrench and socket. The upper bolt must come out entirely. Slide the clamp down the housing and rest it on the steering box.
- 15.) Using your dikes, clip off the protruding portion of the clips securing the steering column floor seal and push them through the firewall using the 3/16" punch and hammer needed. The column assembly should be ready to come out.

STEERING BOX REMOVAL



- 1. Remove the 1-1/4" nut and washer that secure the pitman arm to the sector shaft.
- 2. Using the pitman arm puller, remove the pitman arm from the sector shaft.
- 3. Remove the three nuts securing the steering box to the frame (9/6").

- 2. Re-install the pitman arm on the sector shaft.
- 3.) Install the new rag joint on the steering box. If all has been successful you should now be ready for the bench work.

BENCH WORK



The first step is to separate the column mast jacket from the shifter tube.

- 1.) Using your Phillips head screwdriver, disassemble the upper end of the column by removing the three retaining ring screws from the lock plate. One of the screws has no obstructions but you will have to move the turn signal in one direction or the other to remove the other two.
- 2.) Remove the wire retainer clamp by unscrewing the retaining screw on the left side of the column at the entry slot.
- 3.) Remove the wires from the retainer with a small flat head screwdriver. Note: Be sure to mark exact location of each wire.





- 4.) Remove the turn signal housing by pulling the entire assembly out through the top taking care not to damage any wiring or connectors.
- 1. Remove the lock plate, spacer and shift lever housing.
- 2. Disassemble the lower portion of the column by removing the three bolts

- 9.) Remove clutch head screw and lower cover.
- 4. Remove the box by wiggling it off the frame then carefully moving it up and out. If the generator Is in the way you may need to either loosen it and move it in or take it out completely.

and washers, using a

1/2" socket or wrench, then carefully removing the lower bearing.



7.) You should now be ready to separate the shifter tube from the steering column and clean both parts. We are now ready for the tube and steering column modification.



It's always best to have shop and assembly manuals on hand to make sure your installation is correct and to make the project as easy as possible. We recommend factory manuals, available at Greg's Automotive

MODIFICATION



- 1. First and quite possibly the most crucial part of this job, using the scribe or sharp marker make a line about eight inches long from the bottom of the mast jacket steering column tube up. This important marking is going to enable you to properly align your column when it's welded back together.
- 2. You need to mark the tube and mast jacket for cutting. Our car required that we cut a 3-3/16 inch section out starting three inches up from the bottom. So we measured up 3" and made a scribe then we measured up an additional 3-3/16"

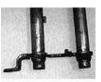


5.) Modify the steering shaft to attach the rag joint by cutting it down to 31.25" to the top of the steering spline as shown above. Measure up 3/4" from the bottom of the shaft and grind flat spots on each side. Only grind off enough to allow for a good tight fit in the rag joint. After installing steering shaft in the rag joint and on the steering box, drill a 3/6" hole through the rag joint and shaft. Install a roll pin for security.

and made another mark with the scribe ending 6-3/16" up the mast.



- 3. This next step is very important and this is where we recommend the assistance of a qualified machine shop. The 3-3/16 inch section needs to be cut out and the two pieces need to be welded back together.
- 4.) Repeat the same procedure on the shaft tube using the weld seam as your line. You do this by elongating it an additional 1/2" towards the driver side.





6.) Re-assemble the steering column and install in the car. Note the firewall will need to be slightly modified to allow for clearance of the shifter arm. If you are or have a good machine shop you can cut off the old shifter arm and fabricate a new one with an "L" shaped angle to clear the firewall. Either way will work just fine.

We have limited this article to the modification of your stock column and the installation of the new steering box. However, a power steering pump with the necessary hoses, brackets, pulleys and belts will be necessary to complete the job.

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