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Installing a CPP Steering Box on A Tri-Five Chevy

By Tim Bernsau

Making the upgrade to power steering with a rebuilt GM 605 box is a common project for Tri-Five Chevy owners. These popular steering boxes have become synonymous with Chevy power steering, are a great choice, and are available in rebuilt form from all kinds of manufacturers-but now there's something better.

Not long ago, Classic Performance Products introduced an improved bolt-in alternative for the 605 steering box. The new 500 Series is a re-circulating ball box that features a one-piece cast housing engineered to provide improved operation and response, as well as a tighter overall feel.

These are not rebuilt boxes, the 500 is a completely new product built with all new components. We got the chance to watch one of these new CPP boxes go into a mostly stock '57 Chevy two-door when the owner decided to replace the sloppy steering. The car retains a lot of the factory components including the original small-block and the owner wanted to keep it looking original. The interior was intact and in good shape so he decided to keep the stock column and shifter, making it necessary to modify them for use with the up-to-date power steering system.

We got to CPP just as work was beginning on the installation. If this swap had been performed as part of a frame-off buildup without a body, engine, or half a century's accumulation of grease, dirt, and previous owner mods it would have been a relatively simple bolt-in. In this case, working around these obstacles added more work and more time to the job. Using an aftermarket column would also simplify the process, but since when has hot rodding been simple? In the end, of course, the results were worth the effort, and the '57's owner was impressed with the improvement.



1. The 500 Series steering box from CPP is similar to the GM 605, but features a one-piece housing and 14:1 steering ratio. It is also available in chrome.



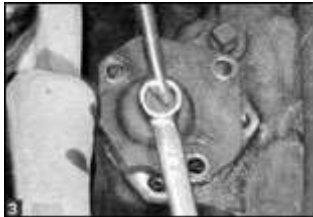
6. And it is critical that the cuts are precisely the same in length and away from the area of the neutral safety



11. The column was previously mounted on the outside of the firewall with a bracket. This tab, welded to the column, allowed it to mount on the inside, using the same fasteners as the old part.



2. The inner workings of the box show the re-circulating ball gear and the internal rack-and-pinion valving.



3. Before he could install the new box, Jeff Wise at CPP had to pullout the old one, which required removing the alternator, master cylinder, and vacuum booster before reaching the steering system itself. He recommends removing as much from under the hood and from the interior before putting the car in the air to disconnect the transmission linkage, since access from underneath is limited. He removed the pitman arm and the steering column assembly before getting to the old box. The new box was then bolted in using the factory mounting holes.



4. In order to work with the 500 Series box, which is longer, the stock steering column shift tube and mast tube have to be cut. Jeff measured and determined that a 3 1/4-inch section

switch (approximately 3 inches from the bottom in this case).



7. The shortened tubes were then welded back together. This is a good job for a qualified machine shop.



8. CPP owner Jim Ries informed us that one common concern among Tri-Five owners running 605 boxes has been improper alignment of the column from the top of the input shaft on the box in relation to the point where it comes through the opening in the firewall. This photo should reassure you that , the input shaft is precisely aligned and centered in this opening.



9. After the steering column assembly was shortened, this L-shaped shift linkage was welded onto the end of the assembly so the linkage would still extend through the firewall into the engine compartment.



12. CPP offers a pump, early small-block mounting bracket, and hoses as a separate package or as part of a conversion kit with the steering box. The bracket is installed in the same location as the early style motor mount ('55-'57 front-mount as opposed to the '58-up side-mount) and is designed with a small ear for fastening the motor mount.



13. The alternator was remounted inward of the valve cover and the alternator bracket above the pump in photo 13 was removed.



14. Locating power steering hoses can be a little tricky. They must be away from both heat and friction, so avoid contact with the engine, the brake lines, or upper A-arms. The line on the left is the pressure line; the one on the right is the

would need to be removed from the shift tube and mast tube.



5. It is recommended that both tubes be cut in the same area.



10. The firewall hole was widened slightly to allow full motion for the linkage.

return line to the pump reservoir. It is critical that the lines are tightened completely to prevent leaking. The steering box itself will not leak.



15. When re-installing the steering column, Jeff drilled a quarter-inch hole on the flat portion of the rag joint and installed a roll pin and pinch bolt to secure it to the shaft.



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