

Side-Steering Made Simple

Installing Gas Alley's cowl steering adapter kit

Gas Alley Street Rods has worked out a neat little conversion kit that makes putting together a cowl-steer setup pretty darn easy. This installation was accomplished in a weekend with more time spent figuring out my box location and specific mounting bracket fabrication than actually assembling the conversion components.

A few weeks ago I wrote a short blog on our **STREET RODDER** website (www.streetrodderweb.com) regarding my discovery of a cowl-steering conversion kit made and sold by a company called Gas Alley Street Rods, and promised to show the conversion kit in use. Well, I finally did get around to doing the install and shot some photos of the process.

Every once in a while (actually pretty darn often now that I think about it) I run across a great new product or an easy way of doing something that elicits one of those palm to the forehead "coulda had a V-8" reactions -- and this Gas Alley Street Rods Cowl Steering Adapter kit is a perfect example. Sliding a V-8 and a five-speed into the diminutive space of a hot rod the size of a Model A can be a challenge sometimes. Sure, the engine'll fit between the 'rails, but what about wedging in stuff like steering and in this case both brake and clutch pedal assemblies. Sure things would've been possible with a Vega-style cross-steer setup, but I wanted something a bit more traditional, like the F-1 box I'd planned on from the start.



The conversion consists of an output shaft adapter that's splined to match either a reversed OE Corvair box or a Flaming River reversed box, an extension shaft that bolts to the adapter, a machined end piece for the shaft, and a straight cut Pitman arm. They also suggest the use of a shaft support (which they can supply as well) which will reduce the torsional twist on the steering box mounting bracket and output shaft.

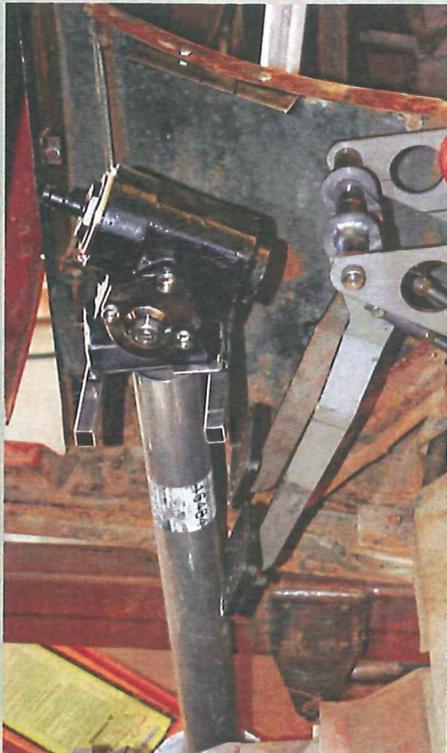
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Though Gas Alley Street Rods offers both aftermarket and remanufactured and reversed OEM Corvair steering boxes, I opted for a new Flaming River Industries reversed Corvair-style box I'd had on hand for one of my other back burner projects. I've used these Flaming River boxes on many of my projects (my wife Candy has too) and have had great luck with 'em.

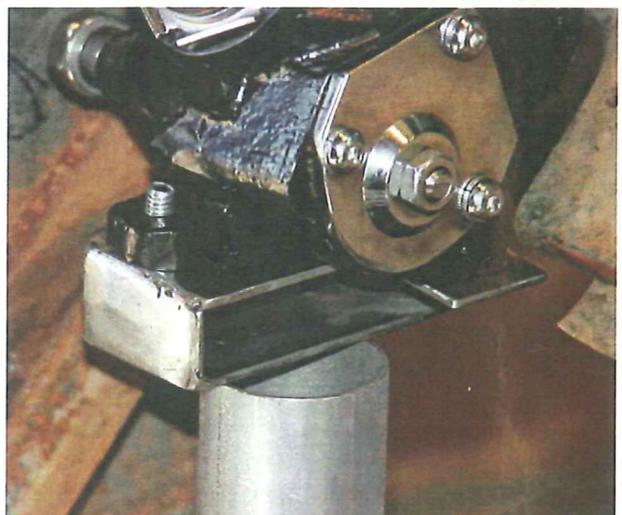
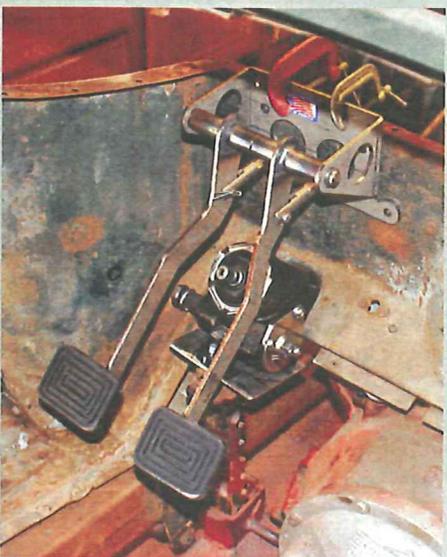


Unfortunately that truck box just wasn't gonna work out like I'd thought—again, it would've worked too, but also would have entailed other changes specific to my situation that didn't want to address. Luckily for me that's when I found Gas Alley's cowl-steering conversion, the perfect solution for my dilemma.

The conversion kit is really a pretty straightforward affair. In a nutshell it allows one to mount a reversed Corvair steering box up under the cowl, resulting in an affordable and easy-to-install side-steer setup. Not counting the steering box (and a handful of nuts and bolts), the kit consists of just a few components, an output shaft adapter, an extension shaft, and a Pitman shaft. And though each circumstance will be a bit different, when it comes to actually mounting the box, the components in the conversion will work in any situation. So take a look at how I handled my install using the Gas Alley Street Rods cowl steering adapter, and if ya think it'll do the trick for you, check out their website for it and a bunch of other cool traditional hot rod parts! **SR**



I guess the hardest part in my case was trying to figure out where and how I was going to mount my steering box. You see, I'm using a Flathead backed by a five-speed and I was having a bit of a dilemma clutch and brake pedal wise in order to work my way around that situation I ended up going with a neat Reno Rod & Custom hanging pedal assembly (look for an install on that setup in the near future, by the way) and wasn't sure whether it'd be best to mount the steering box in front of or behind the pedals. Well, behind the pedals won out so the next step was to fabricate a mounting bracket of some sort.



One thing that threw me off a bit is the fact that the mounting pad on a Corvair box is not horizontal—in other words, in order for the output shaft to be perfectly horizontal the mounting plate has to be tilted to the right by about 20 degrees or so (don't take my word though cuz I didn't write down my measurement).

As I mentioned earlier, fabbing the mounting bracket took up most of my time. Some of that was because I needed to utilize the space above the box for the hanging pedal assembly, I was piecing the bracket together with odds and ends from my scrap metal pile, and I wasn't smart enough to sit down and draw up a design ahead of time, just wingin' it like usual. Anyway, every situation will be unique and I won't bore you with my specific details, just keep in mind the exit location of the output shaft through the cowl, the length of the supplied Pitman arm, and the final angle of your drag link.



After two or three false starts I finally ended up sewing together a mounting bracket that located the box both in the correct position and solidly. Like I said, though the conversion components can be used to install a reversed Corvair box for cowl-steer in any situation, mounting the actual box will vary from vehicle to vehicle.



With the mounting bracket complete enough to locate the box, the next step was to mount the output shaft adapter to the box using the nut and lock washer supplied with the steering box. The mounting bracket will be reinforced for added strength after the balance of the install is complete.



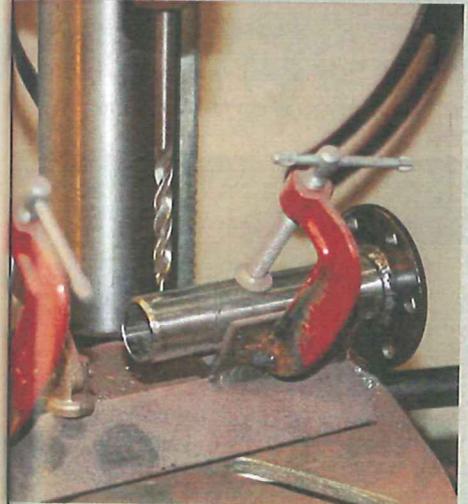
That done I bolted the box and bracket in place and marked the side of the cowl where I'd be drilling my hole. Amazingly I located it correctly, marking the wall with a center punch and drilling my hole with a hole saw. I'll tell ya, drilling that hole was the most stressful part of the whole deal, but I lucked out and got it right the first time.



After celebrating the fact that I didn't wreck my cowl by drilling the hole off center I proceeded to attach the extension shaft to the adapter using the Grade-8 nuts, bolts and lock washers supplied in the kit. Once in place I then measured how much of the extension shaft I'd have to remove so that the Pitman arm would end up in line with the steering arm at the front spindle. If you look close at the end of the extension you'll see a yellow dot. That dot is one of three that Gas Alley puts on the shaft as locators for holes to be drilled for rosette welds when attaching the machined end to the shaft.



Once marked I used my band saw to cut it to length and then drilled the rosette holes in the end. Also keep in mind that you'll want to bevel the edge of the shaft for good weld penetration when attaching the machined end to the tube.



The next step is inserting the machined end into the extension tube. You'll want to pay attention to how you insert it as you'll want to make sure that the Pitman arm ends up hanging vertically when the extension shaft is bolted to the output shaft adapter, double check this before welding.



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I started by doing the rosette welds first, then going back and filling the V where the machined end met the beveled end of the extension tube.



Once the welding was completed I carefully ground the welds smooth—taking my time so as not to damage the extension tube.

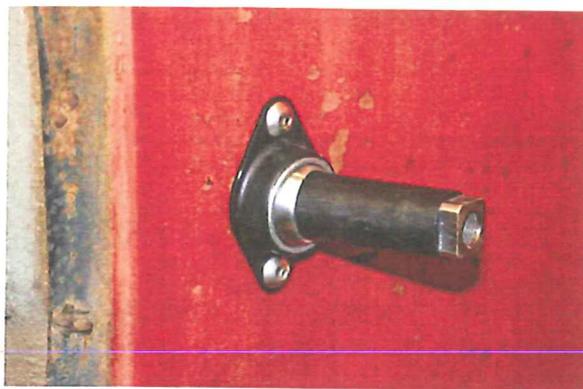


Before proceeding I took a few minutes to test fit the Pitman arm and then to prime and paint it and the shaft before reattaching it to the output shaft adapter.



While placing my order for the kit with Gas Alley I opted to go with the suggested (but still optional) support bearing. The added support it offers will help keep any torsional effects to the steering box mounting to a minimum.

Here you can see just how much I had to trim the extension tube in my particular case. At this point I was just happy I hadn't screwed anything up.



Here's an inside view of the nearly complete installation, I opted to fit the support bearing on the outside of the cowl to help seal the hole through which the extension shaft protrudes, giving it a bit more of a finished look.



Next, I attached the Pitman arm to the shaft using the Grade-8 bolt, flat, and lock washer supplied in the conversion kit. Gas Alley suggests the use of thread locking compound on the bolt threads as well as drilling its hex head for safety wire too. I will do both before the truck hits the road!



Finally I fashioned a drag link out of a section of 3/4-inch-od DOM tubing and a pair of rod ends (those with a sharp eye may notice I hadn't added the jamb nuts) to finish off the install.



In a future story I'll get back to my hanging pedal assembly install and perhaps give you a peek at the shorty column and tube I've yet to fashion and install. Until then, if you think this cowl-steering conversion might be the way to go in your situation I strongly suggest hitting Gas Alley Street Rods' Website for more info.