



Tilt And Twirl

We replace and update the steering column in a second-gen Camaro.

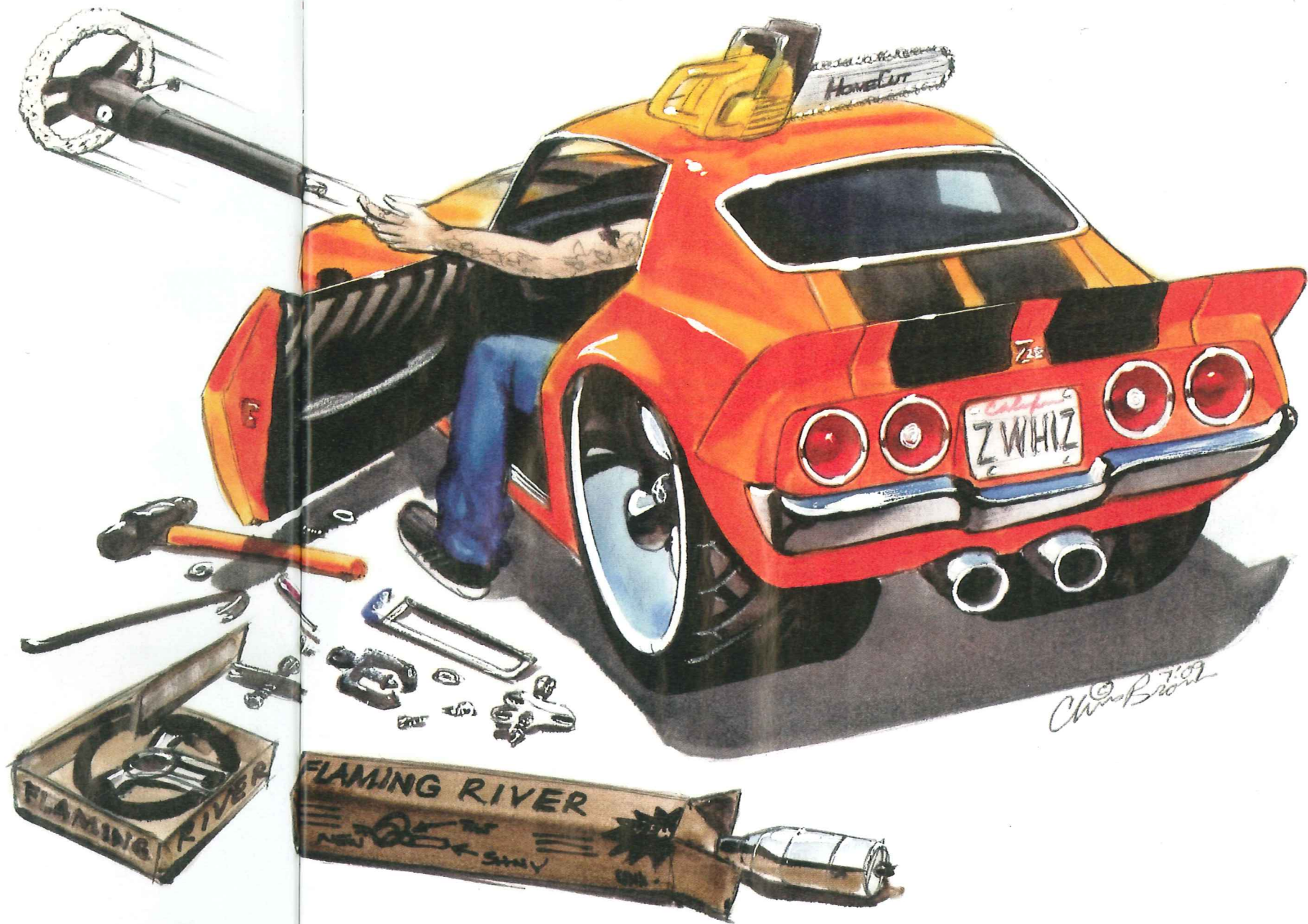
by Steven Rupp | photographs by the author | illustration by Chris Brown

•Ergonomics is all the rage these days, especially in the automotive arts. Having the various controls we use to interface with our classic Chevys in just the right spot really adds to the overall driving experience. Having them in the wrong spot, for lack of a better term, blows. The steering wheel is how we become "one" with our cars and having it positioned correctly makes a huge difference, not just in performance driving, but even cruising down to the local Dairy Queen.

This whole concept is really nothing new. Back in the day, the General offered tilt columns as an option for those that didn't mind shelling out a few extra bucks for some added driving comfort. Today it's nearly impossible to find a car that doesn't have a tilt column as standard equipment.

Adding a tilt column to a non-tilt car isn't rocket science, but there is one problem: Availability. Twenty years ago, you could just hit up a salvage yard and find a good OEM unit, but over the years these carcasses have been picked clean and it has become increasingly harder, and more expensive, to find factory tilt columns. Also, given that most of them are over 40 years old, they're typically suffering from the ravages of time.

Unless you're building a concours restoration, there's a better way: The aftermarket. Companies like Flaming River are making retrofit tilt columns, and the best part is that they're brand new and made from modern components. This lets you upgrade your ride without getting tetanus at a local scrapyards or having to deal with a factory column and all of its worn out components.



1

SOURCE:

Best of Show Coachworks
760.480.0227
www.bestofshowcoachworks.com

Flaming River
714.648.8022
www.flamingriver.com

Summit Racing
800.230.3030
www.summitracing.com

◀The main player in this process is this 33-inch tilt column from Flaming River (PN FR30001, \$549). It has a factory-style ignition switch and includes two keys. Best of all, it's designed to be a plug-and-play deal in terms of the wiring. All of Flaming River's columns are comprised of new components, not re-manufactured parts.



2

▲ We also picked up this slip shaft double-D (DD) kit (PN FR1856, \$115.21) from Flaming River. This will let us attach the new column to the steering gear box. We will also be ditching the factory rag joint and going to the stainless U-joints included in the Flaming River kit. The shaft has about 3 inches of travel to help eliminate binding caused by chassis flex.



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◀Here's the factory arrangement. The OEM shaft is connected to the gearbox by way of a coupler, also known as a rag joint.



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▲ After disconnecting the rag joint and unbolting the broken column from the firewall and the dash, we were able to remove it from the Camaro. Our second-gen had a tilt column, but it was busted and no longer held any position besides fully tilted up. Not exactly the most ergonomic position for driving.



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▲ As you can see, the old column was removed in one piece. On second-gen Camaros the plate that seals the firewall area around the column is attached to the column. Once the new column is in place, you will either need to remove this from the factory column and adapt it to the new column or fabricate a new one from some sheetmetal. We opted for the latter.



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▲ We then attached this adaptor plate from Flaming River (PN FR20300, \$39). This will make everything line up perfectly for our Camaro application. They call it a Stramp Clamp. It includes a rubber mount for vibration absorption.



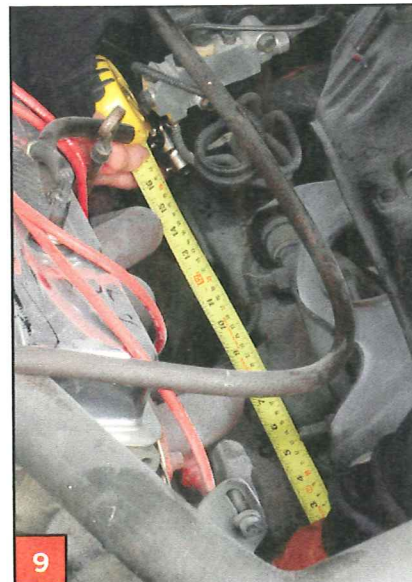
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▲ To the Flaming River adaptor plate we then attached the factory bracket taken from our original steering column. This is the only part reused from the OEM column.



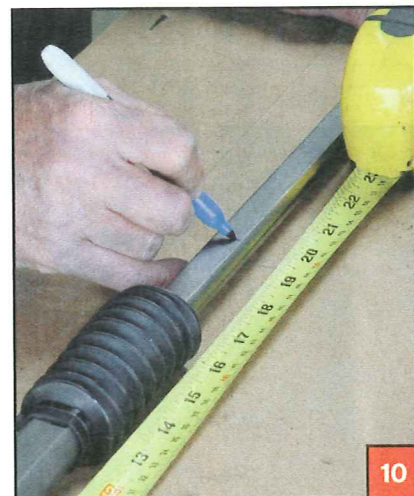
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▲ With that done, we were able to slide the new steering column through the firewall and bolt it under the dash. We then simply plugged the factory wiring loom into the plug on the steering column. We wish all wiring jobs were this easy.



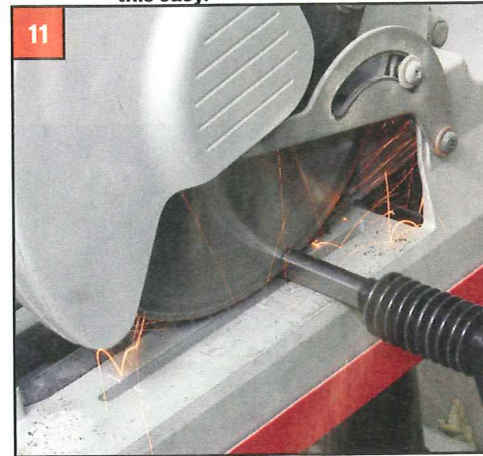
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▲ With the steering column in place, we installed the U-joint on the end of the column and measured to the steering box. Remember ... Measure twice, cut once.



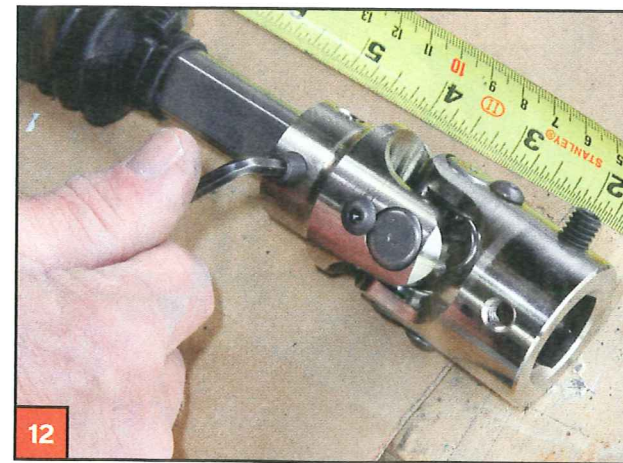
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▲ We then transferred that measurement to our collapsible Flaming River shaft. Remember that you don't want the shaft all the way collapsed or all the way apart, but rather somewhere in the middle of its range.



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▲ To make the cut, we used a diamond blade in our chop saw. Whatever you use, try to make sure the cut is as close to 90 degrees as possible. This will lessen the chance of it binding in your universal joint. We made the cut about 1-inch long so that we could fine-tune the length with the part in the car.



12

▲ With the shaft attached to the new steering column, we then precisely determine our final cut. With the mark made, we revised the chop saw.



14

▲ Using the marks left by the set screws, we then used a drill to "dimple" the shaft ends. This will ensure the set screws stay in place where they are supposed to. After all, having your steering come apart on the highway would fall directly into the "bad" category.



16

▲ Here you can see our finished shaft assembly. Make sure you let Flaming River know what type of steering box you have when ordering your system since they use different splined shafts. We then hooked up a grease gun to the zirc fitting on the new shaft to lube it up.



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▲ It was time for us to test-fit the U-joint on the end towards the steering box. We tightened down the set screw hard enough so that it made a mark in the shaft. We repeated this procedure on the column side as well.



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▲ Here you can see the lower U-joint installed. On the end nearest the steering box, we locked the set screw in place with the supplied jamb nut, however, for clearance reasons, we had to shorten the set screw securing the U-joint to the collapsible shaft. This meant we couldn't use a jamb nut there. Instead we applied a generous dab of blue Loctite. On the upper U-joint we were able to use jamb nuts on all the set screws.



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▲ Back inside the car, we installed our functional, sweet-looking turn signal and tilt levers (PN FR20112AL, \$39.00). We also bolted in the tapered billet adaptor hub from Flaming River (PN FR20119TA, \$99.50). The adaptor hub allows for the use of any five or six-bolt steering wheel.



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▲ We opted for Flaming River's Nova Deluxe leather steering wheel (PN FR20127DX, \$279.95 at Summit Racing). The three-spoke design is 13.4 inches in diameter and has an almost OEM look to it.



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▲ Lastly, we popped on the leather wrapped steering wheel cover and tested the horn. If you need a horn kit, Flaming River offers one, but we were able to make what we had work. Now, if we can just get the rest of the interior looking as good as the steering wheel and column.