

CoolRide air suspension adds a nimble new dimension to the 1963-67 Chevy II

by Doc Frohmader

One of my early favorite memories is cruisin' in Stormin' Norman's Chevy II ragtop. I was just out of high school and Norm was putting together the car in a much more sophisticated way than he had during our high school prowling, including some cherry red metallic paint I'd figured out how to mix from some Cadillac Firemist components, and one of the nastiest 6-bangers around.

Bagging The Chevy II

He'd worked that 292 in every way he could think of. I have no idea how many hours he spent grinding and polishing to make those heads flow. He experimented with a single quad, three-deuce, and even dual quad intakes. Four speeds came and went, as did various ratio rear axles. That car could make the small block guys crazy, 'cause you could hear it was a six, but ran like something else entirely. He showed tail lights to a lot of challengers.

However, as well as that car ran in a straight line, it was nothing to write momma about when it came to handling. Stiffer springs were used to help with body roll and wallowing, but although it worked to make the car corner, the ride was miserable. When you're that young you notice but don't particularly react to such discomfort (real men don't whine...). In the many years since, a lot of effort has gone into Chevy II suspension. Springs, A-arms, shocks, supports, braces, and even entire front dog houses were fabricated. Some work.



Well-made suspension components are typically designed for simplicity and function. The ART Chevy II CoolRide kit is a good example. You'd almost expect more complication in something that does so much to enhance ride and comfort.



This is what you start with. The spring is positioned over a conventional triangulated upper A-arm while the lower arm uses a strut to stabilize it. There will be brake upgrades later, but for now it's worth seeing it go together nearly stock.

The thing is, although these are still very popular cars, most of the gear built for them was focused on racers - particularly drag racers - so for the street driven C-IIs a good balance between ride and handling remained elusive. Until now. Air Ride Technologies developed a kit for the front of the Chevy II making use of stock components or, for that matter, a good many of the aftermarket items if you have or want them.

The advantage of air ride is that you can do several things not practical with steel springs. First, ride height is adjustable. You can go from riding tall to stock height, or down to dragging frame if that's what turns your crank. It takes a flick of a finger and you ride up or down at will. Along the same lines, air pressure also determines spring rates in air springs. Like steel springs, air springs have an initial capacity rating, but air pressure allows variation in rate. The more pressure the stiffer the spring and the harder the ride. You can adjust for handling, comfort, a balance between, or even for the amount of weight you have in the car. If Big Bruno snags a ride, you can accommodate his extra (and unbalanced) 300 pounds by adding a little extra air in that corner. In short it allows you to make a choice as to how you want your suspension to perform without tearing anything apart. Finally, air suspension components are rubber, fabric, and billet aluminum for the most part and you'll find them lighter than coil spring hardware. It not only makes the car lighter, but reduced un-sprung weight makes the suspension a little more nimble.



Jack stands to keep the car up and stable and a good floor jack make the work safer. Start by lifting the wheel up, but not enough to lift the car.



Want to keep your face intact? Worried about a spring getting loose? Tie a chain around it and the A-arm and even if it flies, it shouldn't cause damage - just a startling noise.



Remove the tower reinforcement, but leave the shock in place for now. Loosen all the hardware and shoot some WD-40 on the hardware before moving on. The easier it is to get the hardware out without yarding around on the parts, the easier and safer the work.



I dropped into the Air Ride Technologies shop recently and we took the opportunity to document how the new kit goes together and how it looks in the car ART used to prototype the kit. The kit consists of specially selected double convoluted air springs calibrated to Chevy II weight and suspension needs, new shocks matched to the springs, and all the brackets and hardware required to finish the job.

Installation requires basic hand tools plus a drill and bits, a good floor jack, jack stands, spring compressor, and safety chain.

Rodney (Welding Rod) Mason inserts a pair of spring compressors to control the spring. If you don't own one, borrow one from a friend or from one of the parts houses offering tools.



Now you can use two wrenches to get the nut off the shock bayonet. Until now, the shock kept the spring from going anywhere. Remove the four bolts holding the shock bracket and get it out of the way - you won't need it any more.



After you remove the lower shock bayonet nut, the whole thing slips out the top.



Lower the jack until the spring is loose and gently remove it. Remember to remove the chain. Before setting the spring aside, loosen the spring compressors.

The last part to go is the lower spring mount which bolts to the A-arm. Again, this won't be reused.



If there is any damage to repair, including rust, now's the time. Because the fender wells are also the frame horns and suspension mounting points, it's important to make sure it's in good shape. Replacements in stock form, reinforced units, and even complete tube structures are available for this purpose.



The ART air spring and upper spacer/adapter are bolted together, the air fitting installed and the threaded rod tightened into the unit before installing it. Make sure you point the fitting to the slotted side of the adapter and it's a good idea to insert the air line before installation.



On the bottom, another bracket is bolted to the air spring. It's hard to get the bolt started after the mount plate is installed.



Slip the whole assembly up into the tower and into the center hole in the top mount. Leave it hang.



The top plate mount is formed so it will lie flat to the sheet metal with the center bolt at about the center of the tower opening. It only wants to fit one way. When positioned, Tighten the center bolt to hold it, and drill a 1/2 inch hole at the rear of the mount as shown here.

Please don't forget the safety oriented gear, because I'd hate to think a loyal reader wasn't smarter than his tools. As is the case with any suspension work, it's up to you to make sure you get it right. If you choose not to pay attention to the instructions, forget to tighten the hardware, or drop the car on your toes, you have only yourself to blame. Specific to air ride are such concerns as making certain the air springs are clear of all interference and routing air lines in a protected way. All lines, storage tanks, and pumps must be kept safe and secure, with no vibration, loose lines, or half-assed mounting allowed unless you enjoy wasting time and money on repairs and have little value for your health or that of others.

Other than that, all I can say is the installation is quite simple, can easily be done complete with one of several different types of air supply, storage, and control systems available from ART (you pick) in a single Saturday, and the results are very satisfying.



Lift the A-arm up until it contacts the lower spring mount and bolt the mount to the A-arm using the original holes.

The A-arm gets a 5/8 inch hole drilled so the rear edge of the hole is even with the outside edge of the lower spring mount and centered top to bottom in the arm.



A shock stud is installed in the A-arm. You may have to use a washer or two to space things right.

The shock bayonet is inserted through the new hole in the tower and top mount. It's cleaner and smaller than the OEM setup.



The shock bottom mounts to the stud and the install is done but for plumbing and controls. This position shows the air spring at full extension. You will see where the lower lip of the tower reinforcement needs a rounded notch trimmed back for shock clearance.

The suspension at full compression. At this point, the top of the A-arm is actually resting on the bottom of the dog house, so you know it can get down there. I'd put a snubber between the arm and doghouse for piece of mind.





A simple way to handle control is this setup which includes pump, tank, air line and fittings, analogue gauges and manual controls. It's business-like and fully functional.



The high-end RidePro kit might contain pump, tank, lines and fittings, and then add digital gauges, solenoid-operated valving with micro-switches, and even a large-bore setup for rapid deployment called Big Red. Big Red uses 1/2 OD (3/8 ID) line and 3/8 ID valves for fast action.