

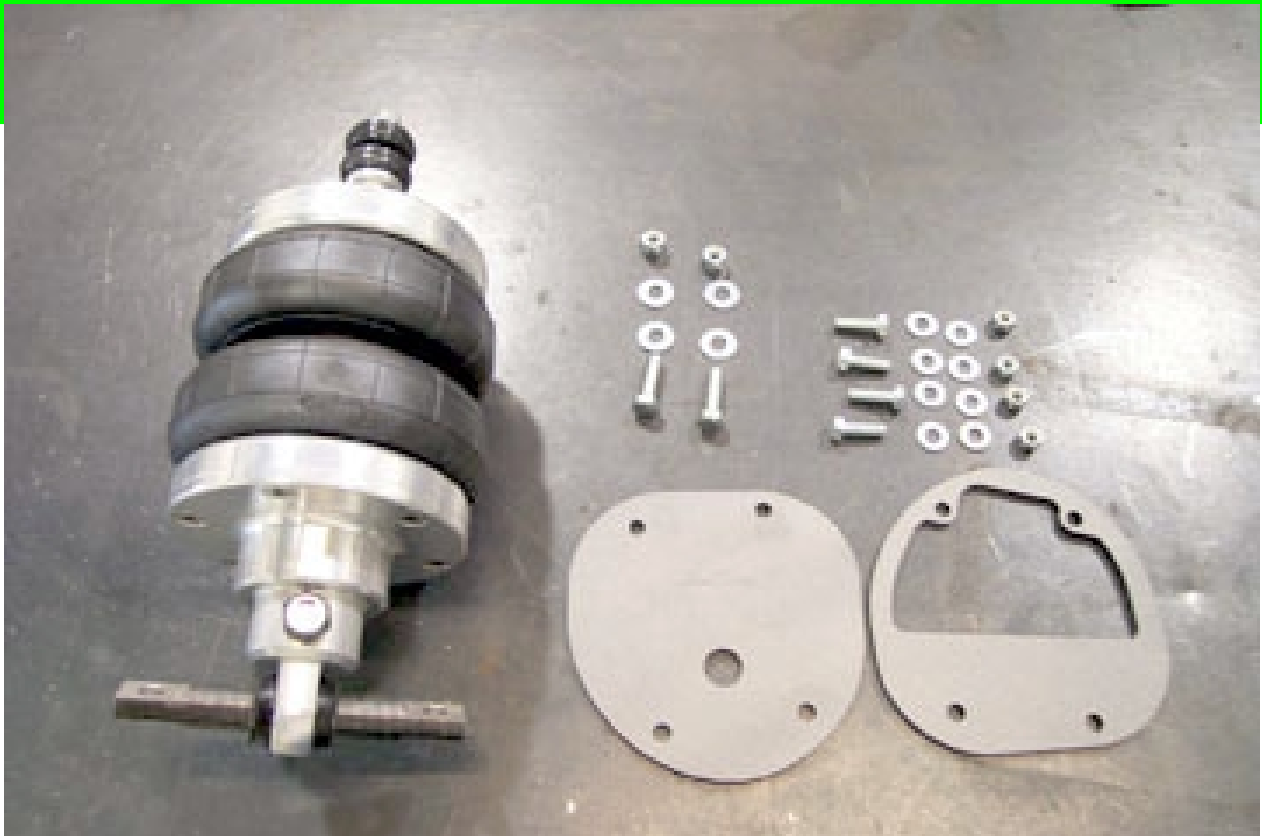
Shocking Chevy II

ShockWave air suspension tames the front of your 1963-67 Chevy II

by Doc Frohmader

As much as I love the look, the size, and the performance potential of a Chevy II (Ol' Grumpy had something there...) you're unlikely to see (then or now) one of these cars leading the pack on a road course. Like most OEM vehicles, C-IIs were built for street use by the general public - a public which lacked the interest or sophistication that could get GM to provide high-end handling. To be fair, not many cars could claim great handling back then, but the C-II was notorious. So for most of us, these cars were primarily relegated to straight-line use where light weight was of primary concern and there wasn't much turning involved.

Street cars saw a lot of attempts at improving ride and handling as well as stiffening the car for better torsional control and weight transfer. Stiffer springs were used to help with body roll and wallowing, but although they worked to make the car corner, the ride was miserable. Of course, when you are really dedicated to your car you notice but don't particularly react to such discomfort (real men don't whine...). So no one gave up and a lot of effort has gone into Chevy II suspension. Springs, A-arms, shocks, supports, and braces - even entire front dog houses were fabricated. Some work.



Bottom line: although very popular cars, most of the suspension parts built for them has been directed at racing - particularly drag racing - so for street driven C-IIs a satisfactory balance between ride and handling was difficult at best. Until now. Air Ride Technologies' newest kit for the front of the Chevy II makes use of stock components or, for that matter, a good proportion of aftermarket gear if you have or want it - and gives you the control to tune the suspension the way YOU want it.

Air ride advantages include several things not practical with steel springs. For example, ride height is adjustable. You can go from high-water tall down to stock height, or all the way to frame surfing low if that's what makes you happy. A simple flick of a finger and you're popping up or down on all four corners. Since air pressure determines spring rates in air springs, spring rate can be controlled with air pressure as well. Air springs have an initial capacity rating just like steel springs, but air pressure allows variation in rate. The more pressure the stiffer the spring and the harder the ride. Adjusting for handling, comfort, a balance between, or even for the amount of weight you have in the car is designed into the system. When the Butt sisters hunker down in the back seat, you can add some pressure to the rear springs to lift the bumper off the ground.



The original CII spring is positioned over a conventional triangulated upper A-arm while the lower arm uses a stabilizing strut. Like most upgrades, disc brakes will come later, but for now it's worth seeing it go together nearly stock.



Always use 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.



Don't want to eat a flying spring? 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.



If you are just getting friendly with Bertha in the shotgun seat, you can add pressure to the right side spring and that corner will rise to the occasion. In short, it allows you to make a choice as to how you want your suspension to perform without tearing anything apart. For those concerned with vehicle or suspension weight, air suspension components are rubber, fabric, and billet aluminum for the most part and you'll find them lighter than coil spring hardware. ShockWaves make the car lighter, and the reduced un-sprung weight makes the suspension more responsive.

I visited Air Ride Technologies' prototype shop a while back and Rodney Mason and I installed the kit in the same car ART used to prototype the original ShockWave air ride kit.

Rodney 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.



ShockWaves are a combination air spring and twelve-way adjustable QA-1 billet shock all wrapped top and bottom a billet mount. Designed specifically for these cars in terms of capacity and rate range, the air spring components allows adjustable height and stiffness. The twelve-way adjustable shocks are not just smoke and mirrors - they actually have the range and capacity to make serious alterations in ride performance and handling. It's up to you to determine the best combination of air pressure and shock adjustment for the ride and handling you want.

As long as you have basic hand tools, a drill and bits, a good floor jack, jack stands, spring compressor, a safety chain and a little common sense, you can install the ShockWave kit. Don't forget the safety oriented equipment - doctors and hospitals eat up a lot more time and money than you'll 'waste' staying healthy. With any suspension work, it's up to you to make sure you are installing it correctly and all the I's are dotted and T's crossed. If you ignore the instructions, forget to tighten the hardware, or drop the car on your feet, you have only to look in a mirror to identify the guy at fault. On all air ride systems, make sure the ShockWaves are clear of all interference.

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 original top of the tower has two slotted holes and two fixed holes. Make sure the top is clean and undamaged.

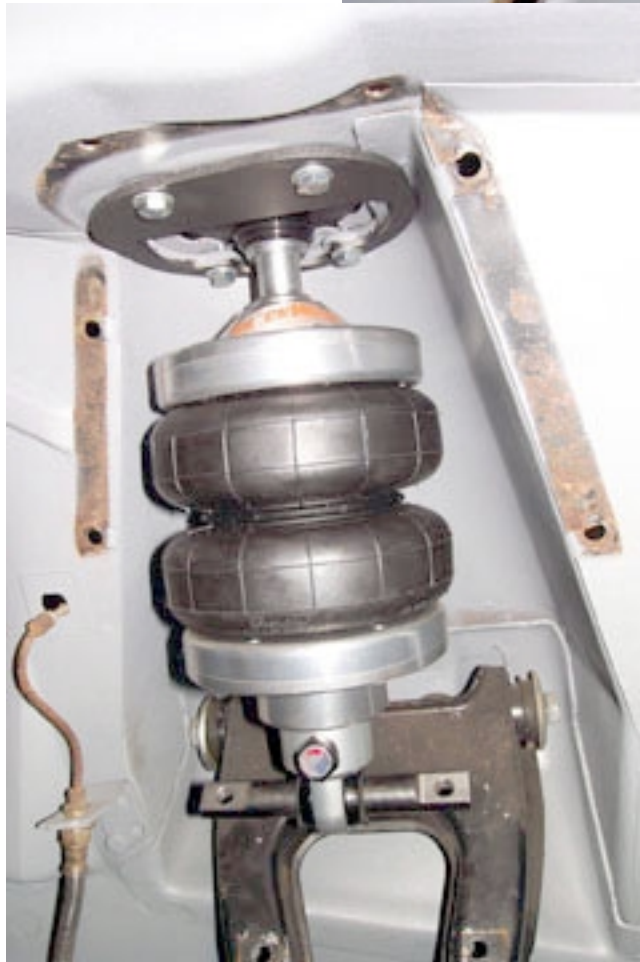


Bolt the top mount plate to the tower using the two outside bolts and drill the inner two out to 3/8 inch like Rodney is doing here.

The top plate completely covers the tower opening. Use the included 3/8 hardware and drop the plate and bolts into position.



Underneath the cut-out plate sandwiches the tower top with the upper plate. Nut it together and tighten completely.



The whole assembled ShockWave unit slips up through the center hole in the top plate. By now you can both see and feel how much more compact and light the ShockWaves are compared to the old steel coils and shocks.

The bayonet end gets a urethane bushing, washer and double-nuts to hold it in place. Make sure not to rotate the unit out of place.





Lift the A-arm up to contact the cross-shaft in the ShockWave lower mount and bolt it to the arm. Note the shock adjustment located to the outside so it's easy to get to.

With the tower reinforcement back in place, the job is finished but for air supply, controls, and plumbing. This is what it looks like with the ShockWave fully extended.



With the ShockWave fully compressed, the A-arm will rise to contact the bottom of the doghouse, or as low as you can go without modifying the doghouse lower rail.



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.

Route air lines so they are protected from road rash. All lines, storage tanks, and pumps must be kept safe and secure, with no vibration, loose lines, or half-assed mounting.

Completing this installation can easily be accomplished with your choice of several air supply, storage, and control systems available from Air Ride in about 4-6 hours. The results will provide many more hours of enjoyable driving.



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 that uses 3/8 ID (1/2 OD) lines and valves.