

# Your Way

## CoolRide Camaro

Gen 1 Camaro front air suspension with CoolRide



by Doc Frohmader

Air Ride Technologies recently went through a major development agenda to create front and rear performance air suspension kits for the Gen 1 Camaros. As is the tradition now at ART, they get their hands on an original specimen car or two and begin the arduous ordeal of designing and engineering all the components of systems that are not just slap-bang, anything to get it done stuff, but elegant and optimized systems. I've worked with ART kits and components almost since they started doing business and am consistently pleased with the

ease of installation and quality of their stuff.

As a result of this comfortable relationship, I am often enough the first media weasel to get a look at new kits and have a chance to check them out and give them feedback. I'm telling you this because some have wondered why I seem to be first out of the box with installation articles for this company.



***This basic configuration of GM front suspension is ubiquitous. Coil springs, a tube shock inside the sprig, unequal length A-arms, and a sway bar. It is not a terrible suspension, but it is not really a great performance suspension. It was designed as a compromise between soft ride and adequate steering. With air suspension you can do a lot better than compromise.***

I'm also telling you this because I have had an opportunity from time to time to offer my own suggestions to ART that have been incorporated in some of these kits. I think it is important to know that a larger company like ART has a policy that allows them to get and use constructive criticism from guys like me. If you never open your ears, you never hear. If you provide a means for the marketplace of ideas to flourish, you get the widest range of potential solutions to use for any problem or development.

The car you see here was the car used to develop the new CoolRide kit and not any kind of special or modified car. Instead, it was selected because it was as original as possible and represented a car that could demonstrate the fit and performance of the new kit adequately. After all, you want YOUR kit to fit and work right the first time, right?

The CoolRide version of the Air Ride Technologies air suspension package uses the double-convoluted Firestone air springs and conventional (but specially selected) gas-filled shocks. All of this functions using the original A-arms, brakes, sway bar, etc., so no additional components outside the kit are required.



***Drop the sway bar link, loosen but don't remove the ball joints, and (of course) make sure the car is up on stable jack stands and the A-arm is supported well before removing the shock. Then remove the ball joint nuts from the loosened joints and slowly drop the A-arm to release the spring tension. Please be careful.***

***The brake flex line and the clamp have to be removed from the original position. This will be relocated.***



***The two holes used for the brake line clamp are used to position the new upper shock mount so make sure the area is clean and nothing is in the way. Unfortunately you will have to re-bleed the brakes.***

***The upper spring tower in all its stock splendor. While it works to encapsulate the steel spring well, it is not needed with the air springs and is too small for proper clearance.***



***The outer edge is marked out like this for a cut line to trim back the outer part of the tower. There are dimensions in the instructions, but try to keep it looking like it should be that way.***



***There are lots of ways to cut it, but a good hand on a plasma cutter or a cut-off wheel work best. If you take a little time and make a straight cut and grind the edges, it takes on a professional look – not a hack job.***

One alteration that sometimes makes the uninitiated a bit nervous is that the upper spring tower has to be trimmed to allow clearance for the air spring. Although it looks scary, it is perfectly safe and does not compromise the integrity of the chassis. The way the originals are stamped is not only a convenience in fabrication, but is designed to trap and hold a steel spring in place. You do not want one getting loose, and steel springs are under compression to the point where they will try to walk out if not prevented. I believe the top of the towers is made as a confined area to avoid safety problems in

extreme conditions or if the spring should break. When the tower is trimmed for the air spring you'll see the support for the spring remains the frame rail itself.

An interesting feature of the CoolRide kit is the way the shock is relocated. In the OEM configuration, the shock is inside the coil spring. With the CoolRide air spring, this is not possible. So the solution is to put the new shock in a place quite like the GM trucks, where it is attached to the rear of the lower A-arm and to a bracket on the side of the frame rail



ART designed the new frame bracket to attach using existing holes for perfect location by the end user and to make it fool-proof. The lower mount is incorporated into the new lower spring mount so it is also about as simple as possible.

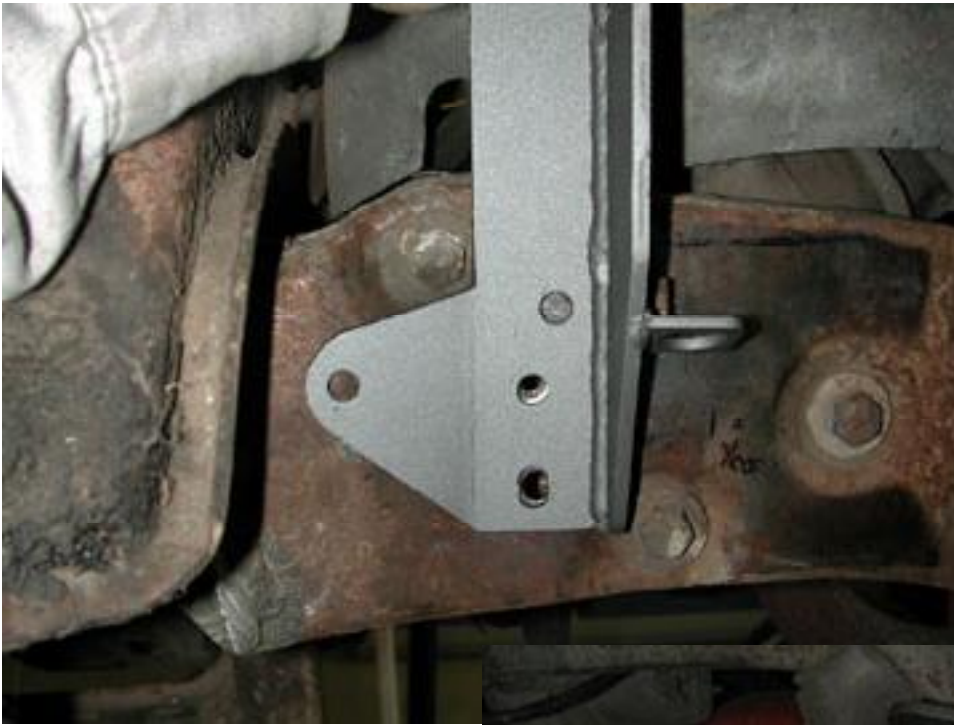
The finished front suspension will definitely show you a solid improvement in ride comfort and handling compared to the stock parts. Of course, you also have the unique air suspension advantage of adjusting stiffness, load capacity, and ride height so it's up to you to set your system to where it is optimized for your car and your needs. It also completes the sea-change upgrade with the AirBar rear suspension, although either kit can be installed separately.

Source:  
Air Ride Technologies  
350 S. St. Charles Street  
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***The inner lip is marked out like this. Again, cut and smooth edges for the best results. The air spring can never contact or rub on anything.***



***While up inside you can still see the intact steel spring mount location, the pocket or tower has now been cleared and dressed out. You can see that neither the frame rail nor the crossmember is altered structurally.***



***Remember those brake clamp holes? The ART shock mount locates on them and two of the new 3/8 mount bolts are installed through them.***



***Tighten the two bolts, drill the other two, install them and tighten. You do this now so you can reach in through the spring tower to tighten the hardware without the spring in the way.***



***All four bolts in and tight and the tab to the rear now holding the original brake line and flex line. Starting to make sense?***

*The lower mount plate for the CoolRide system lies in the A-arm like this. There will be just one position where it lays nice and flat so there's no guessing.*



*The four holes used to mount the plate to the A-arm can be drilled using a right-angle drill or the arm can be removed and drilled on the bench.*

*The assembled CoolRide spring, upper spacer unit and mounting stud. This and make sure it is all tight before installing.*





*After inserting the air line, the assembly is lifted up into the tower and nutted down from the top through the original shock mount hole.*

*The air spring bolts to the bottom through a hole in the mounting plate. Air springs need little to hold them maintain vertical attachment, more so so they won't slip or slide side to side.*



*The lower shock mount uses this cantilever mount stud that attaches to the plate in the lower A-arm.*

***The upper mount uses the standard bayonet type mount. No special shock or parts are required, now or ever.***



***The completed CoolRide installation. No body changes, no clearance problems, and a much more stable, adjustable, and comfortable front suspension are in store.***