



TIGHT AS A DRUM

Stop your Camaro from showing its economy car roots with a chassis-stiffening TigerCage from Air Ride Technologies.

By Johnny Hunkins • Photography by the author

The second-generation Camaro was designed in the late-'60s with one goal in mind: Put one in every driveway. Between 1970 and 1981, Chevy built 1.9 million Camaros, while its sister division, Pontiac, built 1.3 million Firebirds. Everyone drove them, from Sunday school teachers to hot rodders. As such, they were not designed up front to be fire-breathing corner-carving machines. Although some small compromises were made to accommodate enthusiasts in some models, the second-gen F-body was largely a flexi-flyer built on a unibody platform, and shared most components with its econo-car X-body (Nova) sibling.

Yet here we are, almost 40 years later, turning them into hot rods that have to do real work, like carving up the cork screw at Laguna Seca, or dancing through the bus stop at Watkins Glen. If you can't bring your antique up to current production car levels of stiffness (let alone anything state of the art), you might as well race a piece of licorice. It's not going to be fun for you, or your Camaro.

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Since the people at Air Ride Technologies already have a complete line of suspension components for the '70-'81 Camaro and Firebird, it was only logical for them to move into a realm these cars need the most help with: chassis stiffening. The TigerCage seen here is the result of that venture. As with their suspension pieces, Air Ride decided to design the TigerCage as a "top shelf" system, using only the best materials and construction techniques—which in this case means TIG-welded grade 304 stainless steel throughout.

Why stainless steel? It's stronger than mild steel, it lasts forever without being painted or otherwise treated, and it looks absolutely fabulous. In fact, the TigerCage is a work of art in disguise—finely crafted TIG welding is found throughout, and all gussets, clamps, tabs, brackets, and fasteners are designed with care for strength, and aesthetic value. This isn't a pile of raw

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The Air Ride TigerCage is designed primarily as a chassis stiffener—older unibody cars like our '76 Camaro can twist severely, even with a good set of subframe connectors like we've got. The extra stiffness allows the suspension and driver to work better.



The TigerCage install starts with the main hoop brackets. After pulling out the interior and pulling up the carpet, the bracket is used as a template for marking and drilling holes in the floor pan. A companion plate under the floor sandwiches everything solid.

The main hoop is bolted to the brackets on the floor with fasteners that are grade 8 or better, rated a minimum of 150,000 psi, which provide a direct load rating of approximately 11,600 pounds each.



The key to the TigerCage's stiffness is the box joint at the rear window. Two bars meet at this box, and sandwich the package tray—one bar from the hoop, and another from the trunk at the rear frame. The box—which is part of the trunk bar—bolts to the rear seat brace, where it's strongest at the package tray.



This template, included with the TigerCage, lines up with two existing holes on the package tray, and gives a reference point for the four new holes that need to be drilled in the package tray. The box joint butts under this in the corner with the seat brace.

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We put the package tray cover back in after drilling the holes, and marked the position of the holes under the package tray. With the trim cover back on the bench, we marked the outline of the TigerCage's mounting flange on the cover, then cut out the shape.



Now the mounting flange fits perfectly inside the package tray cover, and sandwiches the package tray to the box below, for a nice cosmetic appearance. Note that no large holes needed to be sawed into the package tray—only small drill holes for the fasteners.

All the clamps for the TigerCage are investment cast in the USA out of 304 grade stainless steel. Air Ride tells us this was very expensive, but worth it. Air Ride has tested the clamp collars



past 450 lb-ft of rotational torque. The pivot connections for side bars and seat belt bars can resist over 250 lb-ft of torque.



The trunk bars have the reinforcing box at one end at the package tray, and 304 stainless steel plates where they sandwich the trunk floor at the rear frame rails. A plate of 3/16-inch-thick 1020 steel sandwiches the trunk floor on opposite sides of the frame from beneath.



It's important that the door bars be done last to properly locate the front mounting brackets. Up to this point, all clamps, brackets, and tabs are tightened loosely, so they may move. The clamps and pivot tabs can only be assembled one way, or they won't fit.

Earlier, we didn't show how the hoop brackets were indexed and drilled with the carpet removed, but it's the same for these side bar brackets. Once the holes are established, the carpet is put back, and a punch is used to poke the holes through the carpet, so the bracket can be on top.



Technically, the seat belt bar and four-point harnesses are optional, however, the TigerCage forces permanent removal of the stock lap and shoulder belts when side bars are used. That means the seat belt bar really isn't optional. Note how the belt retractor nacelle on the roof is now gone.

TIGERCAGE PRICING

ITEM:	PART NO.:	PRICE:
'70-'73 Camaro basic cage	TGR12000	\$2,500.00
'74-'81 Camaro basic cage	TGR12500	\$2,500.00
'70-'73 Camaro road race door bars	TGR12002	\$900.00
'74-'81 Camaro road race door bars	TGR12502	\$900.00
'70-'73 Camaro seat belt bar	TGR12003	\$300.00
'74-'81 Camaro seat belt bar	TGR12503	\$300.00
Seat belt harness	RT110000	\$200.00 each
TOTAL (AS INSTALLED IN G/28):		\$4,400

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poles that shows up on your doorstep with a piece of paper saying "Good luck with that." The TigerCage bolts right in without cutting or welding. In fact, to prove their point, Air Ride installed one in our '76 Camaro project car in one day.

We drove to the Goodguys show in Costa Mesa, California, where Air Ride was set up in the manufacturer's midway. Throughout the day, Air Ride installed the TigerCage as the cameras rolled, and people watched. It was truly a unique experience in bolt-on history. When we were done, we made some laps through the Goodguys Street Challenge Autocross, and were amazed at the immediate improvement in chassis stiffness. The suspension was working even better than before—no wonder, since the geometry wasn't moving around. Without question, the Camaro feels lighter, and inspires more confidence. And the Tiger Cage is now the crowning jewel of the interior too. **FR**

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TIGERCAGE APPLICATIONS

- '70-'81 Camaro and Firebird
- '68-'79 Nova
- '66-'67 Chevelle
- '68-'69 Chevelle
- '70-'72 Chevelle
- '65-'66 Mustang Fastback
- '69-'70 Mustang
- '05-'08 Mustang
- '70-'74 Challenger and 'Cuda



SOURCE:

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