

## g-Machine Direct-Fit Subframe Suspension System for 1967-81 Camaro and 1968-72 Nova

1967-69  
Camaro/Firebird



1970-81  
Camaro/Firebird



1968-72  
Nova/Chevy II



Base bolt-on subframe (*above in yellow*) must be combined with a suspension and steering package to form a complete system.

### The Most Complete Subframe System

Chassisworks' muscle-car g-Machine Camaro subframe is a direct-fit, high-performance suspension solution designed for classic GM F-body (1967-81 Camaro and Firebird) and X-body (1968-72 Nova, Apollo, Omega, and Ventura) vehicles. The system features Chassisworks' g-Machine double A-arm, rack-and-pinion crossmember. Its direct bolt-on design enables a time-saving, straight-forward installation that requires absolutely no custom fabrication. Unlike others, ours is the only subframe that includes mounting provisions for all major vehicle system components, as well as an optional chassis-stiffening, subframe-connector system. As an option, factory-welded motor-plate and mid-plate brackets can be added for vehicles requiring maximum chassis stiffness.

## Precision-Fit Quality Through Advanced Technology

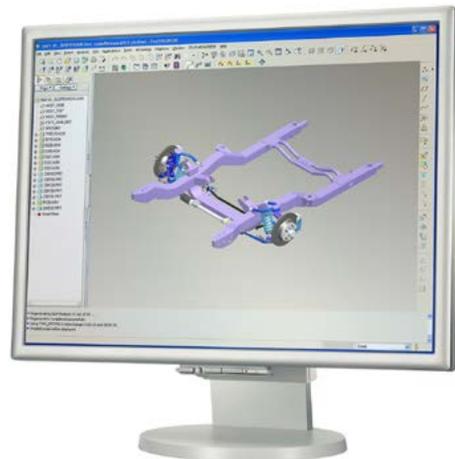
One of the key pieces of advanced technical equipment used in development of our vehicle-retrofit component system is the FaroArm portable coordinate-measuring machine. The FaroArm is an articulating, multi-segmented arm that enables precise three-dimensional digitization of vehicle surfaces and mounting points, accurate to within .003". To begin, multiple identical vehicles are extensively measured to find the OEM tolerance range we must accommodate in our final design. From these scans, an exact model of the vehicle chassis is created in our Pro/ENGINEER software. Engineers can then accurately and efficiently design systems, simulate movement or conditions, and conduct finite element analysis (FEA) testing to optimize performance and durability before physically making any parts. Manufacturing fixtures and tooling are also based on the original vehicle scans, avoiding loose tolerances of transferred prototype dimensions and ensuring the quality and ease of fit of the final product.



The FaroArm is used to digitally scan multiple vehicles and create an exact computer model for development.

## Clean-Sheet Design, Not Revised OEM Geometry

Chassisworks' g-Machine front end is a truly versatile high-performance system, suitable for g-Machines, muscle cars, or any project in need of optimized handling. State-of-the-art engineering workstations with Pro/ENGINEER software—combined with our advanced, automated factory—enabled Chassisworks' engineers to create a current-technology, competitively priced g-Machine front clip and suspension for 1967-81 Camaros and 1968-72 Novas. The complete suspension and steering system is factory-welded directly to the bent-tube billet-component crossmember, ensuring perfect geometry and eliminating the need to weld multiple pieces or make complicated measurements while installing the system. Chassisworks' new g-Machine design is far superior in performance, reliability, and ease of installation than components made to replace 40-year-old '60s muscle-car geometry and variants of the 30-year-old Mustang II suspension. Although late-model-Corvette-based systems offer similar performance, your choice of wheels is extremely limited to flat-face, high-negative-offset wheels.



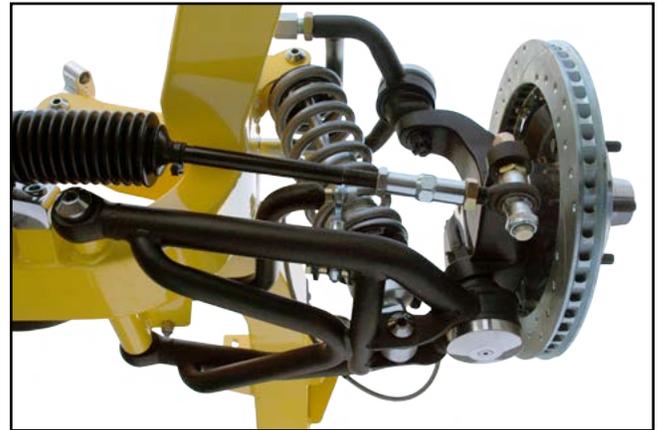
## The Truth About Hydroforming and Its Myth of Superiority

With the tremendous hype surrounding hydroforming we feel it's time to explain its pros and cons. Hydroforming starts with a pre-bent tube in the basic frame shape needed. Internal hydraulic pressure is then applied to further form the bent tube into the shape of a mold cavity that matches the exterior of the new frame component. Hydroformed components can be produced very inexpensively, which explains their popularity with OEM automobile manufacturers. The major drawback to hydroforming is that the tooling is very expensive. As the demand for frames in the automotive aftermarket is very small compared to the volume an OEM builder needs, the tooling cost must be amortized over an infinitely smaller quantity of parts. This alone could add hundreds of dollars to the selling price of a frame. The second problem is the tube must be stretched to flow into the mold cavity, thus decreasing its wall thickness. This also makes some shapes impossible to form. This is why hydroformed frames look so much like a stock frame; they both suffer from the same manufacturing limitations. Chassisworks' manufacturing method to produce complex aftermarket frames avoids the drawbacks of hydroforming. Laser-cut sheet blanks are formed into shape with a sophisticated computer-controlled forming press and then robotically welded together. This process produces very elaborate and vehicle-specific frames that can be built economically in the small aftermarket quantities. Chassisworks can accomplish this

because we have the most advanced state-of-the-art manufacturing facility building aftermarket frames and components. Our flexible manufacturing methods were designed specifically to build lower-volume sophisticated parts. Look at our chassis products and you will see that they are all very elaborate and application specific, with a tremendous amount of individual accessories to complement each other.

### **The Chassisworks' design is superior in these key areas:**

- Chassisworks' fabricated subframe is larger and stronger than all other tubular designs.
- Large 3 x 4" subframe structure at the critical chassis-stiffness area from the suspension crossmember rearward through the firewall mounts.
- By making our own billet rack-and-pinion assembly, we are able to offer perfect front-suspension geometry at the correct hub-to-hub width.
- Rack and pinion is placed forward of the axle centerline (front steer) for better oil-pan clearance and rotates to eliminate sharp universal-joint angles and improve exhaust clearance.
- Virtually no bumpsteer in 6" of suspension travel enables predictable handling regardless of the vehicle's changing pitch or roll state.
- Broad lower A-arm increases load capacity and stability during braking and cornering.
- Lower A-arm length reduces track-width change and roll-center movement during suspension travel for smoother transitions entering and exiting turns.
- Lower shock mount is located very close to the balljoint, increasing the shock-motion ratio and allowing use of lighter, lower-rate springs for better suspension control without degrading ride quality.
- The g-Machine spindle is taller than OEM spindles and therefore increases camber gain during body roll, keeping tires in better contact with road surface.
- Two-inch-dropped spindle lowers ride height and center of gravity to improve overall handling.
- Short/long arm (SLA) suspension layout is a compact, low-profile suspension design that leaves plenty of room around the engine.
- Traditional hub-style spindle accepts up to 14" brakes and allows more wheel choices compared to Corvette-style spindles.



### **Suspension and Steering Components**

A broad range of suspension and steering components enables the system to be custom-outfitted to match your performance requirements. Options include manual or power rack-and-pinion assembly, Street- or g-Machine control arms, behind-crossmember- or forward-of-rack-mounted antiroll bars, fabricated or sculpted spindles, and 11-3/4" rotor for street brakes, or 13" or 14" rotor for high-performance brakes. Bolt-on installation, perfect geometry, and tailored performance make the g-Machine system an excellent choice for your next project.

### **Direct-Fit NoFab Installation**

Direct-fit installation ensures that all major drivetrain components remain in their exact factory positions. Engine height and setback are stock, requiring no additional



hood clearance or modification to the firewall or transmission tunnel. Two mounting styles of antiroll bars are available. The standard rear-mount anti-roll bar has the same forward clearance as the stock Camaro clip. Optional splined-end, forward-mount anti-roll bar attaches under the front frame rails, forward of the rack and pinion to provide approximately two more inches of forward pan clearance. A hub-to-hub width of 60" matches the original factory dimensions, allowing use of preexisting or factory wheels without the need for spacers. Ride height is approximately 1-1/2" to 2" below stock and maintains 4-1/2" of ground clearance below the suspension crossmember.

## Tire Sizes

Recommended tire sizes are based on the factory overall tire diameter of 25.5" with a wheel backspacing of 5" to allow inside clearance with the subframe. We strongly recommend test fitting tire and wheel packages to check for adequate clearance due to manufacturer differences in physical tire dimensions.

**Camaro/Firebird 1967-68** - Fenders may limit tire section width to approximately 9.5" (245 = 9.6")  
Typical sizes include: 245/50-16, 245/45-17, 245/40-18, 245/35-19, and 245/30-20.

**Camaro/Firebird 1969** - 11-11.6" tire section width (275 = 10.8", \*285 = 11.2", \*295 = 11.6")  
Typical sizes include: 275/45-16, 275/40-17, 275/35-18, 275/30-19, and 275/25-20. \*285 & 295 series tire can be used with a carefully selected wheel backspace that centers the tire in the allowable space.

**Camaro/Firebird 1970-81** - 11.5-12.5" tire section width (295 = 11.6", 315 = 12.4") May require sheetmetal clearancing. Typical sizes include: 315/40-16, 315/35-17, 315/30-18, 315/25-19, and 275/25-20.

**Nova/Chevy II 1968-72** - 11" tire section width (275 = 10.8")  
Typical sizes include: 275/45-16, 275/40-17, 275/35-18, 275/30-19, and 275/25-20.

## Fabricated Subframe with Integrated g-Machine Crossmember

### Subframe Design and Construction

The subframe structure is made up of specially fabricated frame rails, frame horns, and our g-Machine suspension crossmember. Our unique, completely enclosed subframe structure is stronger and more rigid than commonly used open-channel designs. Each frame rail is assembled from four separate, 12-gauge (.104") sheet metal panels to create a strong, yet lightweight boxed structure. This assembly procedure enables us to construct a tapering frame rail with uniform wall thickness throughout the entire structure; this result is not possible by any other manufacturing technique. Rail width remains constant at 3", but height gradually increases from 3" tall, underneath the body, where clearance is of concern, to 4" at the suspension crossmember, where strength and stability are highly important.



Rail panels are CNC-laser-cut and include numerous detailed positioning features. Once the contour bends have been made at our fully automated press, the panels are assembled using the positioning features. Similar to a three-dimensional puzzle, the rail panels can be fit together only in the absolute correct shape. The four corner seams are welded with a continuous bead to completely bond the joint. Subframe rails, suspension crossmember, and various mounts are then assembled and welded in a fixture. The final fixture welding of the subassemblies ensures that body, motor, transmission, and bumper mounts are perfectly positioned for a trouble-free installation. Completed base subframe assemblies are shipped as bare steel with raw corner welds. As an option, welds can be sanded smooth ready for paint or powder coating.

Part Number	Description
7701	Base g-Machine Welded Subframe Assembly, '67-69 Camaro/Firebird, '68-72 Nova
7703	Base g-Machine Welded Subframe Assembly, '70-76 Camaro/Firebird
7704	Base g-Machine Welded Subframe Assembly, '77-81 Camaro/Firebird
OPTION	Sanded Corner Welds

## Single-Piece 4 x 2" g-Machine Crossmember

Bent-tube, billet-component crossmembers are a completely closed, rigid structure with greater strength and resistance to bending and twisting than other designs. Formed from a single piece of 4 x 2 x .120" steel tubing, large-radius mandrel bends are placed at each end to distribute loads throughout the crossmember, eliminating fatigue points at critical areas. Slots for the billet-mount tabs are machined in a large horizontal machining center with dedicated fixturing to guarantee correct component geometry, ensuring the suspension moves as designed.



Locating features are machined into each crossmember to enable self-positioning of billet components.

## Interlocking-Slot-Tab Technology

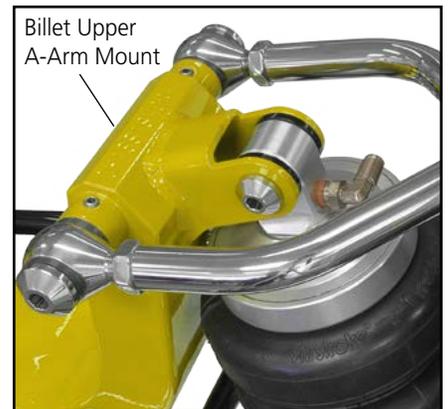
Self-fixturing female slots used with machined male tabs provide an interlocking assembly method that enables A-arm, rack and pinion, and shock mounts to be accurately positioned in all axes. This guarantees the suspension will perform as designed. Non-interlocking designs are not nearly as accurate after welding. Superior spray-arc welding process produces the best weld penetration with excellent appearance.



Billet rack-and-pinion mount inserts into machined slot on crossmember.

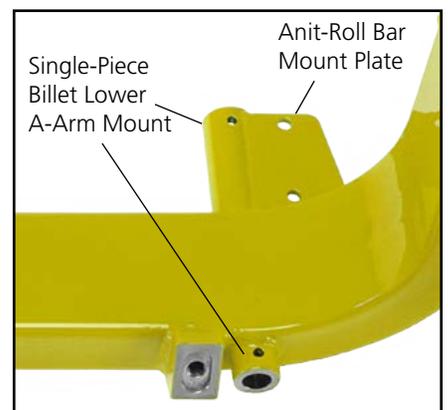
## Billet Steel A-Arm Mounts with Pivot Pins

Billet steel, CNC machining allows us to create A-arm mounts with specific areas of increased thickness for added strength not possible with other designs. Unlike slot- or eccentric-mounted A-arms, Chassisworks' exclusive fixed-axis pivot-pin design eliminates the possibility of shifting pivot shafts, provides greater shear strength, and increases bending resistance. Threaded bosses at each end of the mount enable use of set screws to lock A-arm pivot pins into position. Using slot-tab technology, billet upper A-arm mounts snap and weld into place providing anti-dive geometry and capping the open ends of the 4 x 2" crossmember to better distribute forces, decrease flex throughout the structure, and provide a solid location for the upper shock mount. The lower A-arm mount is a single-piece component passing directly through the crossmember and supported by the anti-roll-bar mounting plate to distribute bending forces throughout the crossmember. This increases rigidity and geometric accuracy of the control arm for more predictable handling.



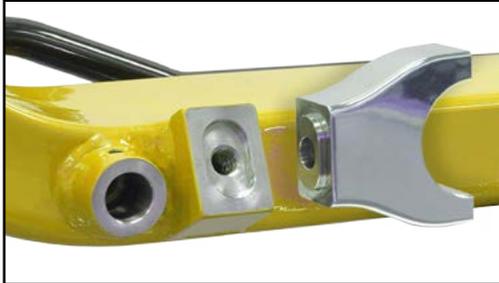
## One-Piece Clevis Shock Mount

Our g-Machine upper shock mount has a 1-5/16"-wide, formed clevis that accepts 1/2" mounting hardware and provides adequate clearance for use with VariShock coil-overs or ShockWave™ air suspension. Our one-piece design has an integrated gusset across the top and sides to bridge the billet upper A-arm mount to the 4 x 2" crossmember. This provides a larger, more stable mount base, with better appearance than welded designs, and eliminates bending fatigue possible with common sheet metal- or tubing-mounted designs of other manufacturers.



## Billet Rack Mounts and Clamps

Billet steel rack mounts using dual slot-tab technology form an interlocking bridge between the 4 x 2" crossmember and billet aluminum rack brackets. The angled mount fixture welds to the crossmember, attaching to the rack body at the widest points. This allows positioning of the rack above the bottom of the crossmember, safe from road hazards. Billet aluminum rack clamps attach into interlocking grooves in the rack gearbox, preventing flex in hard cornering unlike rubber-mounted designs. This also allows rotation of the input shaft to aid steering-shaft installation around engine obstacles and the exhaust system.



Slot-Tab Technology, Interlocking Joint



Pinion Rotated **Up**



Pinion Rotated **Down**

## Subframe Installation Features

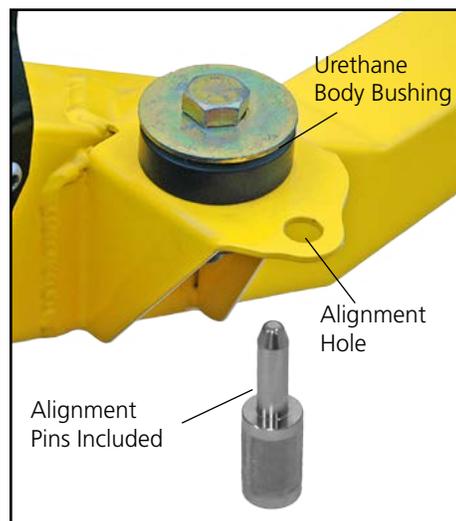
### Detailed Installation Guide

Included with each g-Machine Camaro subframe is a painstakingly detailed 104-page installation guide. The guide features over 300 individual photos completely illustrating the installation process at each and every step. Beginning with clip assembly, continuing on with removal of factory components, and ending with final installation, our comprehensive guide makes installation and setup an uncomplicated task.



### Alignment Holes

To simplify subframe alignment in relation to the body, the OEM alignment holes have been duplicated on the g-Machine subframe. Note that not all replacement subframes on the market have this important feature. A pair of CNC-machined alignment pins is supplied to make subframe installation simple and highly accurate.



### Body Bushings

Body-bushing kits are available for g-Machine or stock-subframed 1967-81 Camaro/Firebirds and 1968-74 Novas; in urethane (P/N 6822) or billet aluminum (P/N 6816). Urethane bushings have adequate rigidity for performance street cars, but they significantly dampen noise and vibration transferred into the passenger area. Billet aluminum bushings are more suitable for road race or drag race vehicles, where maximum rigidity is required and noise and vibration are less of a concern.

Part Number	Description
6816	Subframe to Body Bushings, Billet Aluminum, '67-81 Camaro/Firebird and '68-74 Nova (set of 6)
6822	Subframe to Body Bushings, Black Urethane, '67-81 Camaro/Firebird and '68-74 Nova (set of 6)

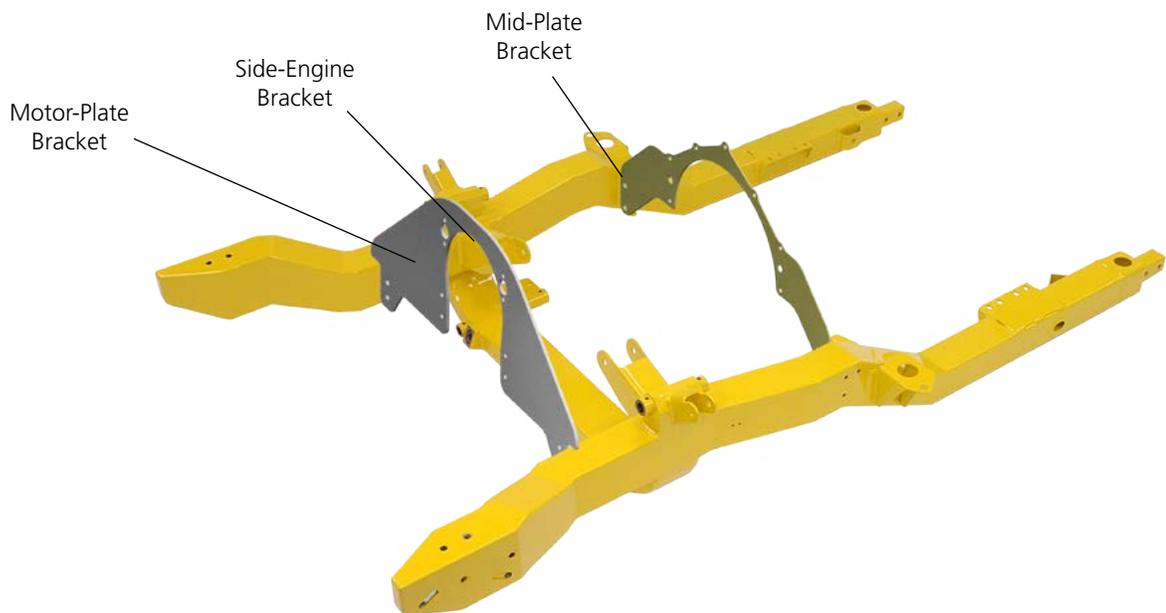


Billet Aluminum Body Bushing (6816)

## Engine-Mount Options

Multiple engine-mount-bracket options enable true bolt-in installation for nearly any drivetrain. Standard side-mount brackets for small-block, big-block, and LS-style V8 engines are available, as well as small- or big-block motor plates and mid plates for more serious performance applications. To positively locate the engine, driver-side motor-plate, mid-plate, and side-mount frame brackets have correct-sized bolt holes. Passenger-side mounts use slightly oversized slots to facilitate installations with minor chassis variances. Subframes ship with all mounts factory-welded and ready for installation.

Frame Engine-Mount Options
No Engine Brackets
Side Engine Brackets Only
Side Engine and Mid-Plate Brackets
Small-Block Motor-Plate and Mid-Plate Brackets
Big-Block Motor-Plate and Mid-Plate Brackets
Side Engine, Small-Block Motor-Plate, and Mid-Plate Brackets
Side Engine, Big-Block Motor-Plate, and Mid-Plate Brackets
Small- and Big-Block Motor-Plate, and Mid-Plate Brackets



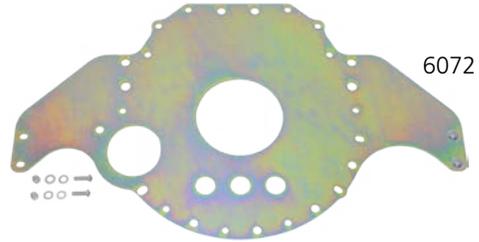
## Billet Side Motor Mounts

Part Number	Description
6007-0	Billet Aluminum, Chevrolet Side Mount, LS Series, Bare Finish
6007-1	Billet Aluminum, Chevrolet Side Mount, LS Series, Anodized Finish
6007-2	Billet Aluminum, Chevrolet Side Mount, LS Series, Polished Finish
6055-0	Billet Aluminum, Chevrolet Side Mount, SB, BB, V6, Bare Finish
6055-1	Billet Aluminum, Chevrolet Side Mount, SB, BB, V6, Anodized Finish
6055-2	Billet Aluminum, Chevrolet Side Mount, SB, BB, V6, Polished Finish



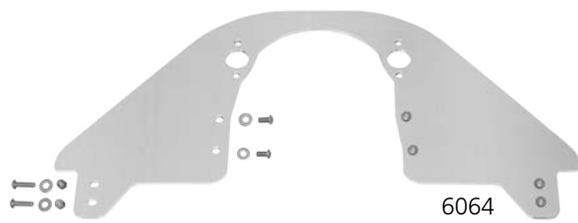
### Bolt-In Mid Plates (g-Machine Subframe Only)

Part Number	Description
6065	Bolt-In Mid Plate, Automatic, Camaro '67-69, Nova '68-72 (g-Machine subframe only)
6066	Bolt-In Mid Plate, Lakewood, Camaro '67-69, Nova '68-72 (g-Machine subframe only)
6071	Bolt-In Mid Plate, Automatic, Firebird '67-69 (g-Machine subframe only, Pontiac V8)
6072	Bolt-In Mid Plate, Lakewood, Firebird '67-69 (g-Machine subframe only, Pontiac V8)
6083	Midplate V8 to LS Adapter, Camaro '67-69, Nova '68-72, Camaro '70-81 (g-Machine subframe only)
5915-7703-MA	Bolt-In Mid Plate, Automatic, Camaro '70-81 (g-Machine subframe only)
5915-7703-ML	Bolt-In Mid Plate, Lakewood, Camaro '70-81 (g-Machine subframe only)
5915-7703-MP	Bolt-In Mid Plate, Automatic, Firebird '70-81 (g-Machine subframe only, Pontiac V8)
5915-7703-MQ	Bolt-In Mid Plate, Lakewood, Firebird '70-81 (g-Machine subframe only, Pontiac V8)



### Bolt-In Motor Plates

Part Number	Description
6063	Bolt-In Motor Plate, Small-Block V8, '67-69 Camaro, '68-72 Nova
6064	Bolt-In Motor Plate, Big-Block V8, '67-69 Camaro, '68-72 Nova
6082	Bolt-In Motor Plate, LS-Series V8, '67-69 Camaro, '68-72 Nova
5915-7703-EB	Bolt-In Motor Plate, Big-Block V8, '70-81 Camaro
5915-7703-EL	Bolt-In Motor Plate, LS-Series V8, '70-81 Camaro
5915-7703-ES	Bolt-In Motor Plate, Small-Block V8, '70-81 Camaro



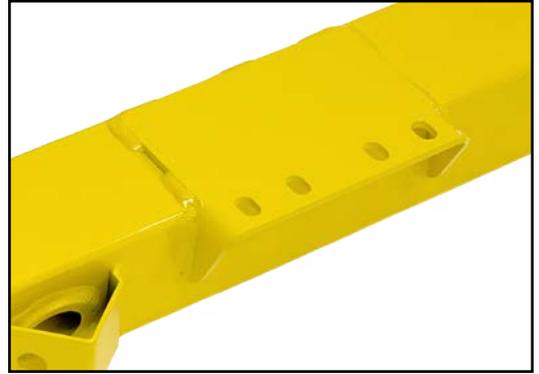
### Bolt-In Headers (g-Machine Subframe Only)

Part Number	Description
6454	Small-Block Chevy, 1-3/4" Primaries, Cermakrome Coated, Camaro '67-69, Nova '68-72, Camaro '70-81 (g-Machine subframe only)
6455	Big-Block Chevy, 2" Primaries, Cermakrome Coated, Camaro '67-69, Nova '68-72, Camaro '70-81 (g-Machine subframe only)
6456	Small-Block Chevy, 1-3/4" Primaries, Bare Steel, Camaro '67-69, Nova '68-72, Camaro '70-81 (g-Machine subframe only)
6457	Big-Block Chevy, 2" Primaries, Bare Steel, Camaro '67-69, Nova '68-72, Camaro '70-81 (g-Machine subframe only)



## Transmission Crossmember Mount

The transmission crossmember mounts are bent to form bracing gussets welded along the inside wall of the frame rail. The bracket overlaps the entire top panel of the subframe, increasing total material thickness. Two sets of mounting holes at the bracket allow use of the same g-Machine tubular transmission crossmember with V8 engine blocks or modern LS engines. Mounting hardware is inserted from the bottom side of the bracket and threaded directly into the weld nuts of the crossmember. This eliminates the need for hardware access space above the mounts and allows the crossmember to be positioned tighter against the body into the channel in the stock floor to obtain maximum exhaust clearance. Direct-fit transmission crossmembers are available for Turbo 350, Turbo 400, Powerglide, 700R4, 200-4R, 4L60, 4L65E, 4L80E/L85E, Muncie 4-speed, Richmond 5- or 6-speed, and many Tremec 5- or 6-speed transmissions.



## Transmission Crossmembers

Part Number	Description	Position <sup>1</sup>
5916-F10-01	'67-69 Camaro, '68-72 Nova - 4-Speed / Powerglide / Turbo 350	20.525"
5916-F10-02	'67-69 Camaro, '68-72 Nova - 700R4 / Tremec / Richmond 5-Speed / 4L60	22.295"
5916-F10-03	'67-69 Camaro, '68-72 Nova - Turbo 400 / 200-4R / 4L65E <sup>2</sup>	26.848"
5916-F10-04	'67-69 Camaro, '68-72 Nova - Richmond 6-Speed ROD	24.375"
5916-F10-05	'67-69 Camaro, '68-72 Nova - Tremec Aftermarket T-56 Magnum 6-Speed (TUET11009 and TUET11012)	26.6"
5916-F10-06	'67-69 Camaro, '68-72 Nova - 4L80E/4L85E Chevrolet Automatic	-
5916-F20-01	'70-81 Camaro - 4-Speed / Powerglide / Turbo 350	20.525"
5916-F20-02	'70-81 Camaro - 700R4 / Tremec / Richmond 5-Speed / 4L60	22.295"
5916-F20-03	'70-81 Camaro - Turbo 400 / 200-4R / 4L65E <sup>2</sup>	26.848"
5916-F20-04	'70-81 Camaro - Richmond 6-Speed ROD	24.375"
5916-F20-05	'70-81 Camaro - Tremec Aftermarket T-56 Magnum 6-Speed (TUET11009 and TUET11012) and others with crossmember mounting bolts 26.6" behind back of engine.	26.6"
5916-F20-06	'70-81 Camaro - 4L80E/4L85E Chevrolet Automatic	-

### Notes:

1	Position of mount is the measured distance from back surface of engine block to center of transmission mounting holes. Use length shown to determine usable crossmember for transmissions not listed. (Must verify pan clearance.)
2	4L65E transmission can be used with LS-series engine only. 5916-F10-03 crossmember must be mounted in rearmost holes of subframe bracket.



5916-F10-01 - 4-Speed, Powerglide, Turbo 350



5916-F10-02 - 700R4, Tremec, Richmond 5-speed, 4L60



5916-F10-03 - Turbo 400, 200-4R, 4L65E



5916-F10-04 - Richmond 6-speed ROD

## Bumper and Core-Support Mounts

All factory bumper and core-support mounts for both 1967-69 Camaros and 1968-72 Novas have been duplicated at the g-Machine frame horns. Weld nuts are factory-installed in fixed positions or movable adjustment slots to simplify installation. Weld nuts eliminate the need for backside hardware access, allowing a boxed frame horn design that contributes to front-end vehicle stiffness.



## Inner Fender Splash Flaps

Durable rubber splash flaps are available to take the place of the OEM pieces. Debris within the engine compartment is kept to a minimum due to the flap's contoured edge, specifically designed to fit the g-Machine suspension and OEM inner fender.

Part Number	Description
6656	'67-69 Camaro/Firebird - Inner Fender Splash Flaps for OEM Inner Fender with g-Machine Front Suspension (pair)



## Clutch Pivot-Shaft Bracket Mount

Three threaded holes along the driver-side frame rail are used to mount our clutch pivot-shaft bracket (P/N 6331), sold separately. The bracket supports the factory clutch pivot shaft in the same position as the factory bracket.

Part Number	Description
6331	Clutch Linkage Frame Pivot Mount for g-Machine Camaro Subframe (7701)
6332	Clutch Linkage Frame Pivot Mount for g-Machine Camaro Subframe (7703, 7704)



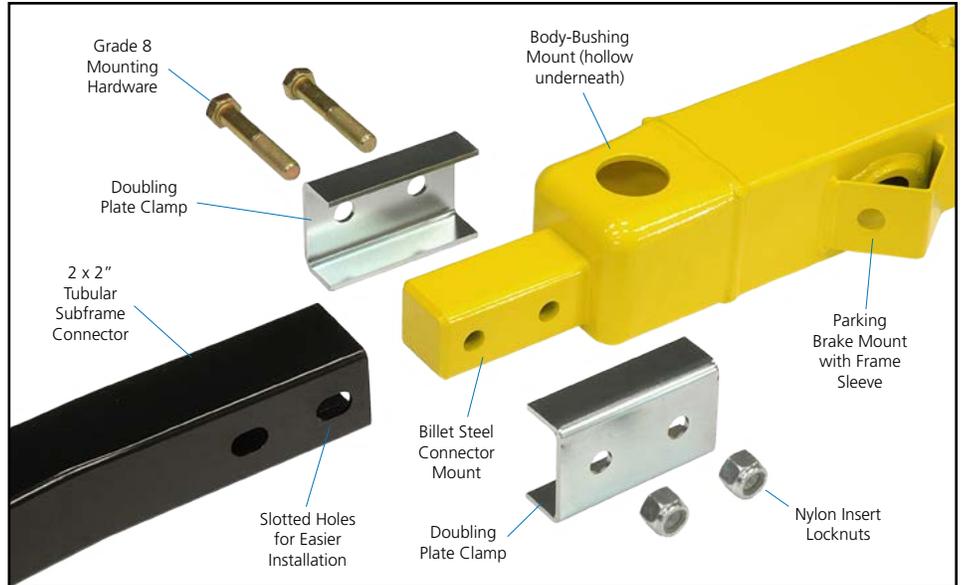
## Parking Brake Brackets

Provisions to mount the factory parking brake cable are included as part of the welded subframe assembly. A sleeve allows the cable to be routed through the driver-side frame rail, protecting it from possible undercarriage scrapes and permitting use of the factory adjustment mechanism and passenger-side cable anchor.



## Subframe Connector Mounts

The g-Machine subframe is the only system available with a built-in subframe-connector mount. Mounts are CNC-machined billet steel and serve to cap the rear end of the frame rail for added rigidity. Tubular subframe connectors simply bolt to the mount extensions and to the factory leaf-spring mounting bracket, tying front and rear chassis structures together.



## Bolt-In Subframe Connectors

Chassisworks is the only manufacturer to incorporate a bolt-on chassis-stiffening system into our direct-fit 1967-81 Camaro/Firebird, 1968-72 Nova subframe design. Our unique clamping method is simple to install and creates a connection equally as strong as a welded connector. Once installed the connector system provides a direct structural bridge between the rear subframe at the spring mount and the g-Machine front suspension subframe. A noticeable improvement in chassis rigidity yields more responsive handling and sharper acceleration while relying less on the flexible sheet metal for chassis stiffness. The g-Machine subframe's profile-milled, billet steel connector mount enables a non-flexible, precision fit for the subframe connector. The tubular connector fits snugly over the mount, flush along the lower face, and is securely held in place by doubling plates to more evenly distribute the clamping force from two 1/2" Grade 8 bolts for a slip-free joint. The 2 x 2 x .120"-wall connector tube features multiple, subtle mandrel bends to tightly follow the undercarriage for maximum ground clearance and perfect alignment with the rear factory subframe. To provide the most direct support and increase stability, the OEM leaf-spring mount sandwiches two of the three gusseted connector mounting tabs against the body, while the third tab attaches using a drilled hole at a stronger, contoured area of the undercarriage. This product ships with a black powder-coat finish, complete with Grade 8 hardware and detailed instructions. Note: This product can be used only with hardtop models equipped with our g-Machine subframe system.



## '67-81 Camaro, '68-72 Nova g-Connector System

### ■ Driveshaft Safety Loop

Our bolt-on driveshaft safety loop features a 5-1/2" ID x 2" wide x 1/4" thick tubing loop. Both the mounting tab and bracket are 1/4" thick mild steel and are secured with grade 8 fasteners. Slotted holes at each of the attachment points allow the loop position to be adjusted for

various transmission lengths and driveshaft angles (1/2" vertical, 3/8" horizontal, 3-5/16" fore/aft). Components are powder-coated and zinc plated for corrosion resistance. Installation of our connector support for hardtops is required.



### ■ Exploded View



### ■ Prices and Options

5900-F10	G-CONNECTOR SYSTEM FOR '67-69 CAMARO/FIREBIRD, OEM CLIP
5900-F21	G-CONNECTOR SYSTEM FOR '70-76 CAMARO/FIREBIRD, OEM CLIP
5900-F22	G-CONNECTOR SYSTEM FOR '77-81 CAMARO/FIREBIRD, OEM CLIP
5900-X10	G-CONNECTOR SYSTEM FOR '62-67 CHEVY II/NOVA, OEM OR CHASSISWORKS CLIP
5900-X20	G-CONNECTOR SYSTEM FOR '68-72 NOVA, OEM CLIP
5901-F10	G-CONNECTOR SYSTEM FOR '67-69 CAMARO/FIREBIRD, CHASSISWORKS CLIP
5901-F21	G-CONNECTOR SYSTEM FOR '70-76 CAMARO/FIREBIRD, CHASSISWORKS CLIP
5901-F22	G-CONNECTOR SYSTEM FOR '77-81 CAMARO/FIREBIRD, CHASSISWORKS CLIP
5901-X20	G-CONNECTOR SYSTEM FOR '68-72 NOVA, CHASSISWORKS CLIP
INCLUDES	OUTSIDE FRAME CONNECTORS (SUBFRAME TO REAR SUSPENSION)
	G-CONNECTOR CENTER SUPPORT
	DRIVESHAFT SAFETY LOOP
	OEM FRAME RAIL ADAPTER (IF APPLICABLE)
NOTE	AVAILABLE TO PURCHASE IN STAGES - FRAME CONNECTORS > CENTER SUPPORT > DRIVESHAFT LOOP

# '67-81 Camaro, '68-72 Nova g-Machine Subframe

## ■ VALUE SYSTEM

Includes: subframe clip, control arms with balljoints, spindles, billet manual rack, tie rods, and billet coil-overs with springs



## ■ Value Systems

7701-1 **VALUE SYSTEM** FOR 67-69 CAMARO, 67-69 FIREBIRD (GM F-BODY), AND 68-72 NOVA (GM X-BODY)

7703-1 **VALUE SYSTEM** FOR 70-76 CAMARO, 70-76 FIREBIRD (GM F-BODY)

7704-1 **VALUE SYSTEM** FOR 77-81 CAMARO AND 77-81 FIREBIRD (GM F-BODY)

## ■ Value System Options

OPTIONS SUBFRAME G-CONNECTOR SYSTEM (OUTSIDE FRAME CONNECTORS, CENTER CONNECTOR SUPPORT)  
 SIDE ENGINE MOUNTS, BILLET-ALUMINUM (CHEVY V8 OR LS - BARE, ANODIZED, OR POLISHED - SOCKET HEAD OR POLISHED SPUD HARDWARE)  
 STREET-MACHINE A-ARMS AND ANTI-ROLL BAR (BARE STEEL OR BLACK POWDER COAT FINISH - ANTI-ROLL BAR)  
 MANUAL RACK AND PINION, SATIN FINISH (STEERING SHAFT AND U-JOINTS)  
 SHOCKS (FIXED OR SINGLE-ADJUSTABLE COIL-OVER, OR SINGLE-ADJUSTABLE AIR SPRING)  
 SPRING RATES (500, 550, 600, 675, OR 750 LB/IN)  
 BRAKES, 11-3/4" ROTORS, BLACK 4-PISTON CALIPER (BARE OR BLACK E-COATED ROTOR FINISH)  
 BODY BUSHINGS AND SPLASH FLAPS (URETHANE OR ALUMINUM BUSHINGS - SPLASH FLAPS)  
 TRANSMISSION CROSSMEMBER (4-SPEED, POWER GLIDE, TURBO 350, GM700, TREMEC TKO, RICHMOND 5-SPEED, TURBO 400, RICHMOND ROD 6-SPEED)



# '67-81 Camaro, '68-72 Nova g-Machine Subframe

## ■ OPTION SYSTEM

Includes: subframe clip, control arms with balljoints, spindles, rack and pinion, tie rods, and billet coil-overs with springs



## ■ Option Systems

7701-2 **OPTION SYSTEM** FOR 67-69 CAMARO, 67-69 FIREBIRD (GM F-BODY), AND 68-72 NOVA (GM X-BODY)

7703-2 **OPTION SYSTEM** FOR 70-76 CAMARO, 70-76 FIREBIRD (GM F-BODY)

7704-2 **OPTION SYSTEM** FOR 77-81 CAMARO AND 77-81 FIREBIRD (GM F-BODY)

## ■ Option System Options

OPTIONS	SUBFRAME G-CONNECTOR SYSTEM AND FRAME SANDING (OUTSIDE FRAME CONNECTORS, CENTER CONNECTOR SUPPORT - SANDED FRAME WELDS)
	SIDE ENGINE MOUNTS, BILLET-ALUMINUM (CHEVY V8 OR LS - BARE, ANODIZED, OR POLISHED - SOCKET HEAD OR POLISHED SPUD HARDWARE)
	CONTROL ARMS AND HARDWARE (STREET-MACHINE ARMS: BARE, BLACK, OR POLISHED STAINLESS; OR G-MACHINE ADJUSTABLE ARMS - STAINLESS BALLJOINT CAPS)
	RACK AND PINION (MANUAL: SATIN OR POLISHED FINISH - POWER: BLACK OR CHROME; LEFT- OR RIGHT-HAND DRIVE - STEERING SHAFT AND U-JOINTS)
	SHOCKS (FIXED, SINGLE-, OR DOUBLE-ADJUSTABLE VALVING - POLY OR COM-8 EYES - COIL-OVER OR AIR-SPRING SHOCKS)
	SPRING RATES (500, 550, 600, 675, OR 750 LB/IN)
	ANTI-ROLL BAR AND SPINDLES (3/4", 1", 1-1/4" SOLID OR 1-1/4" SPLINED GUN-DRILLED - BARE OR BLACK POWDER COATED SPINDLES)
	TRANSMISSION CROSSMEMBER (4-SPEED, POWER GLIDE, TURBO 350, GM700, TREMEC TKO, RICHMOND 5-SPEED, TURBO 400, RICHMOND ROD 6-SPEED, TREMEC T-56 MAGNUM)
	BODY BUSHINGS AND SPLASH FLAPS (URETHANE OR ALUMINUM BUSHINGS - SPLASH FLAPS)
	BRAKES AND BILLET HUB (11-3/4" BARE OR 11-3/4", 13" OR 14" BLACK ROTORS - SATIN OR POLISHED HUB)



## '67-81 Camaro, '68-72 Nova g-Machine Subframe

### ■ ULTIMATE PRO-TOURING SYSTEM

Includes: subframe, g-Machine arms, aluminum spindles, power rack and pinion, tie rods, and billet coil-overs with springs



### ■ Ultimate Pro-Touring Systems

7701-3	<b>ULTIMATE PRO-TOURING SYSTEM</b> FOR 67-69 CAMARO, 67-69 FIREBIRD (GM F-BODY), AND 68-72 NOVA (GM X-BODY)
7703-3	<b>ULTIMATE PRO-TOURING SYSTEM</b> FOR 70-76 CAMARO, 70-76 FIREBIRD (GM F-BODY)
7704-3	<b>ULTIMATE PRO-TOURING SYSTEM</b> FOR 77-81 CAMARO AND 77-81 FIREBIRD (GM F-BODY)

### ■ Ultimate Pro-Touring System Options

OPTIONS	SUBFRAME G-CONNECTOR SYSTEM AND FRAME SANDING (OUTSIDE FRAME CONNECTORS, CENTER CONNECTOR SUPPORT)
	SIDE ENGINE MOUNTS, BILLET-ALUMINUM (CHEVY V8 OR LS - BARE, ANODIZED, OR POLISHED - SOCKET HEAD OR POLISHED SPUD HARDWARE)
	STAINLESS BALLJOINT CAPS
	RACK AND PINION FINISH AND COLUMN COMPONENTS (BLACK OR CHROME - LEFT- OR RIGHT-HAND DRIVE - STEERING SHAFT AND U-JOINTS FOR OEM OR IDIDIT COLUMN)
	SHOCKS AND HARDWARE (SINGLE-, DOUBLE- OR REMOTE RESERVOIR 4-WAY-ADJUSTABLE VALVING - COIL-OVER OR AIR-SPRING SHOCKS)
	SPRING RATES (500, 550, 600, 675, OR 750 LB/IN)
	TRANSMISSION CROSSMEMBER (4-SPEED, POWER GLIDE, TURBO 350, GM700, TREMEC TKO, RICHMOND 5-SPEED, TURBO 400, RICHMOND ROD 6-SPEED, TREMEC T-56 MAGNUM)
	BODY BUSHINGS AND SPLASH FLAPS (URETHANE OR ALUMINUM BUSHINGS - SPLASH FLAPS)
	BRAKES (14" OR 15" ROTORS - BLACK OR RED 6-PISTON CALIPERS - THERMLOC 6-PISTON CALIPERS)



# '67-81 Camaro, '68-72 Nova g-Machine Subframe

## ■ DRAG RACE SYSTEM

Includes: subframe clip, control arms with balljoints, spindles, billet manual rack, tie rods, and billet coil-overs with springs



## ■ Drag Race Systems

7701-4 **DRAG RACE SYSTEM** FOR 67-69 CAMARO, 67-69 FIREBIRD (GM F-BODY), AND 68-72 NOVA (GM X-BODY)

7703-4 **DRAG RACE SYSTEM** FOR 70-76 CAMARO, 70-76 FIREBIRD (GM F-BODY)

7704-4 **DRAG RACE SYSTEM** FOR 77-81 CAMARO AND 77-81 FIREBIRD (GM F-BODY)

## ■ Drag Race System Options

- OPTIONS ENGINE MOUNT FRAME BRACKETS (V8 OR LS SIDE MOUNTS - MOTOR PLATE - MID PLATE)
- SUBFRAME G-CONNECTOR SYSTEM AND FRAME SANDING (OUTSIDE FRAME CONNECTORS, CENTER CONNECTOR SUPPORT - SANDED FRAME WELDS)
- BODY BUSHINGS AND SPLASH FLAPS (URETHANE OR ALUMINUM BUSHINGS - SPLASH FLAPS)
- MOTOR MOUNTS AND PLATES (V8 OR LS BILLET SIDE MOUNTS - SMALL BLOCK, BIG BLOCK, OR LS MOTOR PLATE - AUTOMATIC OR LAKEWOOD MID PLATE FOR CHEVY OR PONTIAC)
- STREET-MACHINE A-ARMS AND SPINDLES (BARE OR BLACK POWDER COATED ARMS - DROPPED SCULPTED OR LIGHTWEIGHT FABRICATED SPINDLE)
- MANUAL RACK & PINION AND COLUMN (OEM SHAFT COMPONENTS, WELD-IN RACE COLUMN WITH QUICK-RELEASE HUB)
- EXTENDED 5" TRAVEL COIL-OVER SHOCKS (SINGLE OR DOUBLE ADJUSTABLE)
- SPRING RATES (250, 300, 350, 400, 450, OR 500 LB/IN)
- BRAKES (MEDIUM-DUTY SLOTTED OR HEAVY-DUTY DRAG-RACE BRAKES)



All prices subject to change. Current pricing available at [www.cachassisworks.com](http://www.cachassisworks.com).



Chris Alston's Chassisworks, Inc.  
8661 Younger Creek Drive  
Sacramento, CA 95828

Order: 800-722-2269  
Tech: 916-388-0288  
Fax: 916-388-0295

sales@cachassisworks.com  
[www.cachassisworks.com](http://www.cachassisworks.com)